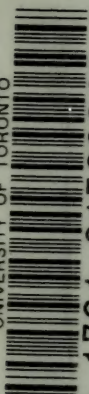
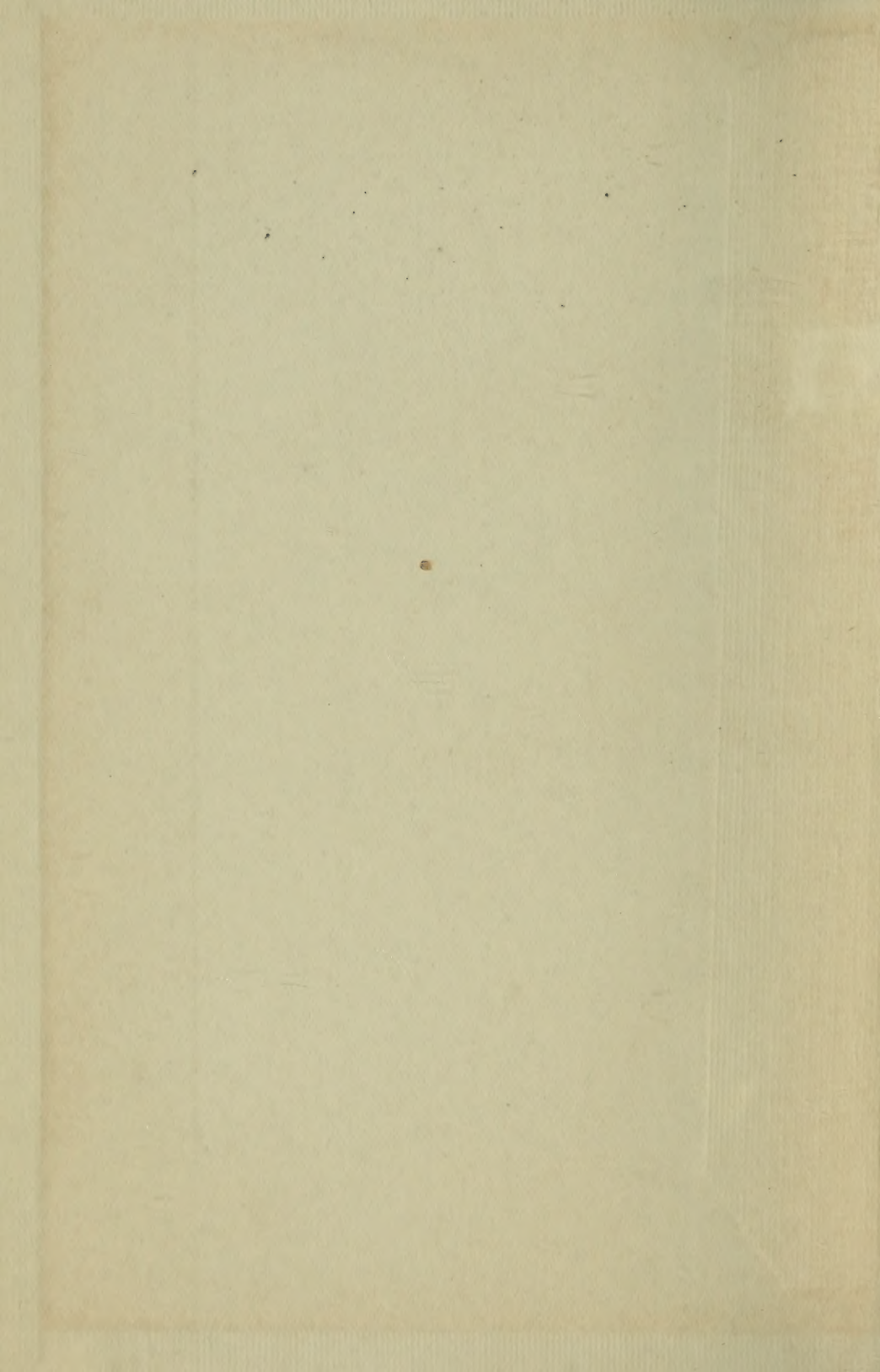


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THE BRITISH RAILWAY SYSTEM

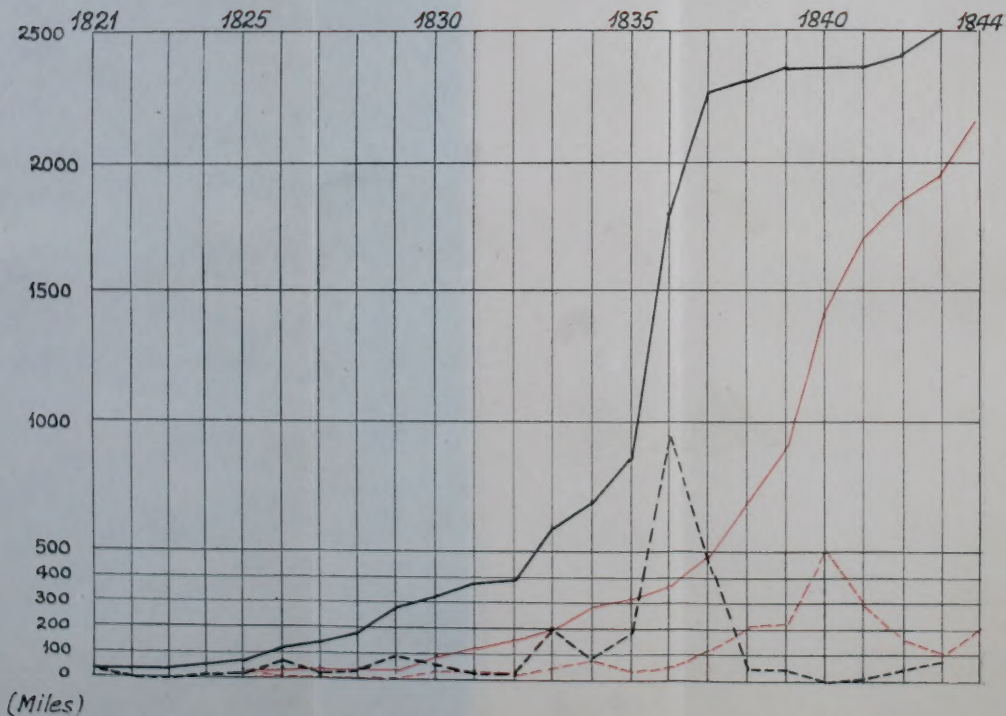




# DIAGRAM OF RAILWAY DEVELOPMENT

MILEAGE SANCTIONED (yearly) ----- (total) ———

MILEAGE OPENED (yearly) ----- (total) ———





# THE BRITISH RAILWAY SYSTEM

OUTLINES OF ITS EARLY DEVELOP-  
MENT TO THE YEAR 1844

BY  
HENRY GROTE LEWIN  
B.A. (CANTAB.)

FORMERLY DISTRICT SUPERINTENDENT, YORK ; AND MINERAL TRAIN  
SUPERINTENDENT, NORTH-EASTERN RAILWAY

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1914



## PREFACE

It is not a little remarkable that although the English people may claim to be the pioneers of railways, no adequate history of the developments of the British railway system has yet made its appearance. While making no pretence to fill this gap, the author hopes that the information given in this little book may prove useful to those who desire to know the origin of the various little railways which later on developed into the great companies of the present day.

The subject of the nationalization of our railways has long been before the public, though hitherto it can hardly be said to have come within the range of practical politics. Recently, however, a Viceregal Commission appointed to consider the Irish railways reported in favour of their acquisition by the State, and now a Royal Commission is sitting to review the whole question with regard to British railways. Under these circumstances special interest attaches to the portions of our railways which are not purchasable under the terms of the Act of 1844, and are dealt with in the following pages.

Whilst great pains have been taken to ensure accuracy, the author is conscious that, amidst the

many conflicting statements to be found in the various sources of information dealing with the subject, errors may have crept in ; he would therefore be much obliged to any reader who would kindly bring them to his notice so that they may be corrected in the event of a further edition being required in the future.

I, WEST SIDE,  
WIMBLEDON COMMON, S.W.

*June, 1914.*



## LIST OF MAPS AND DIAGRAMS

1. DIAGRAM OF MILEAGE AUTHORIZED AND  
CONSTRUCTED EACH YEAR, 1821-1843

*Frontispage*

FACE PAGE

2.	EARLY RAILWAYS IN THE DURHAM DISTRICT . . . .	5
3.	„ SCOTTISH RAILWAYS . .	6
4.	„ RAILWAYS IN THE LANCASHIRE DISTRICT . . . .	7
5.	„ LONDON RAILWAYS . . .	16
6.	RAILWAYS AUTHORIZED IN 1836 . .	21
7.	THE RAILWAY SYSTEM OF 1836-9 .	27
8.	„ „ „ „ 1839-42 .	40
9.	„ „ „ „ 1842-44 .	53

## COMPARATIVE TABLE

THE PASSENGER TRAIN SERVICES OF 1840	46
--------------------------------------	----



## INTRODUCTION

IN the following pages an attempt has been made to give all those interested in our railway system a summary of its earliest development, from which the reader will gather the order in which the various lines came into actual operation, and from which the railway position as regards means of communication (as distinct from financial considerations) will be apparent from year to year down to the end of 1844.

During this period the lines forming the nucleus of all our great systems (except the Great Northern) were opened wholly or in part, and by the end of it the main outlines of our system as we know it to-day were settled for better or worse.

In the year 1844 Parliament passed a most important Act which, *inter alia*, empowered the State at any time after the lapse of 21 years from the passing of any Act for a new railway, reckoning from the year 1844 inclusive, to purchase such railway, at a price equivalent to 25 years' purchase of the annual divisible profits of such railway, reckoning these divisible profits by the average of the last 3 years before the notice to purchase is given.

Four important provisos were, however, attached to the above authority, with a view of safeguarding

the interests of the enterprising people who had embarked their capital in this new form of transport, viz. :—

(i.) The company on whom the State had served notice to purchase had power to demand arbitration as regards the terms of purchase if it considered these terms inadequate in view of the future prospects of the line.

(ii.) The Act specially exempts from compulsory purchase branches or extensions of less than 5 miles in length to lines authorized prior to 1844.

(iii.) In the event of a railway consisting of portions authorized both before *and* after the year 1844, the State, in exercising its right of purchase of the latter, must purchase the portions sanctioned before 1844 as well, if the proprietors so demand.

(iv.) Before the provisions of this Act can be enforced, another Act of Parliament must be passed to confirm the policy of State purchase, and to raise the necessary money

It will thus be seen that all railways sanctioned before the passing of the Act of 1844 stand in quite a different category from those which were subsequently constructed subject to its provisions ; and that in the event of State purchase, the terms and arrangements, with regard to the former, would have to be the subject of entirely new legislation. It is therefore to the railways authorized before the passing of this Act that the attention of the reader is directed.



## EARLY BRITISH RAILWAYS

To state who was the originator of our railways is a difficult if not impossible task. The fact is that they were evolved from the crude devices which were adopted for assisting the transit of vehicles employed in forwarding freight from the producing to the consuming points.

As early as the seventeenth century a species of tramroad came into common use in certain mining districts of this country, whereon horses drew wagons of coal, the wheels of which ran on rough wooden logs placed parallel to one another from the mine to the shipping point, and by the aid of this device the load formerly conveyed was more than doubled. At this period, also in the Newcastle district, the principle of "way leaves" came into force, whereby landowners whose property intervened between pit and river, allowed these tramways to be laid down on their land, and drew a considerable income from those who required access by means of these tramroads over their estates.

This method of transit obtained for about a century with no substantial advance beyond improvements in the quality and laying of the timber baulks. Towards the end of the eighteenth century, however, cast-iron rails were introduced, and in 1804 the first steam locomotive, invented by Trevithick, was tried on a colliery railroad at

#### 4 THE EARLY DEVELOPMENT OF

Merthyr Tydfil, but with indifferent success. For many years, however, it was firmly held by men of science that no engine with smooth wheels could draw an appreciable weight, hence the few locomotives, which the more enterprising colliery owners had introduced, had toothed wheels with a rack to work on. It was not until about the year 1814, when William Hedley and George Stephenson made their first locomotives at Wylam and Killingworth Collieries respectively, that the fallacy of this view was satisfactorily demonstrated.

The few locomotives in use at this period, however, were so clumsy and liable to failure, and their speed so slow, that their use for passenger traffic was out of the question.

1801-21 Although, as we have seen above, horse tramroads were quite common in colliery districts throughout the eighteenth century, it was not until 1801 that the first public Railway Act was obtained—that for the Surrey Iron Railway, from Wandsworth to Croydon, with a branch to Carshalton, a total length of about 9 miles, with a capital of £60,000, the motive power being, of course, horse traction.

During the next twenty years various Acts were passed for the formation of small companies, whose object was the conveyance of purely local traffic, usually by horse power. In the majority of cases they are of no more than passing interest, but one or two, such as the Gloucester & Cheltenham, Bristol & Gloucestershire (or Coalpit Heath Railway) were subsequently taken over and remodelled as



EARLY RAILWAYS  
IN THE  
COUNTY  
OF  
DURHAM  
DURHAM





passenger railways by companies formed at a later date, so will be alluded to in a later chapter.

The year 1821, however, saw the incorporation 1821 of the **Stockton & Darlington**, "for making and maintaining a railway or tramroad from the River Tees at Stockton to Witton Park Colliery, with several branches therefrom, all in the county of Durham." This railway was primarily intended for the conveyance of goods and coal for shipment at Stockton, and by the advice of George Stephenson, who had been appointed engineer, powers were obtained in 1823 to make some deviations from the 1823 original plan, and to work both passenger and freight traffic by locomotive, this being the first instance of Parliamentary sanction being given for locomotives to work passenger traffic. The amended scheme comprised a main line 25 miles long, with four branches—to Yarm, Croft, Black Boy Colliery and Haggerleases, these being  $\frac{3}{4}$  mile,  $3\frac{1}{2}$  miles, 3 miles, and 5 miles in length respectively.

Next year, 1824, the first public railway in 1824 Scotland, the **Monkland & Kirkintilloch**, was sanctioned. This small line was projected for the purpose of cheapening the transit of coal from the Monkland Coalfield to Glasgow. It commenced at Palace Crag Colliery, and ran for  $10\frac{3}{4}$  miles in a north-westerly direction to Kirkintilloch basin of the Forth and Clyde Canal, whence freight was to be shipped to Glasgow.

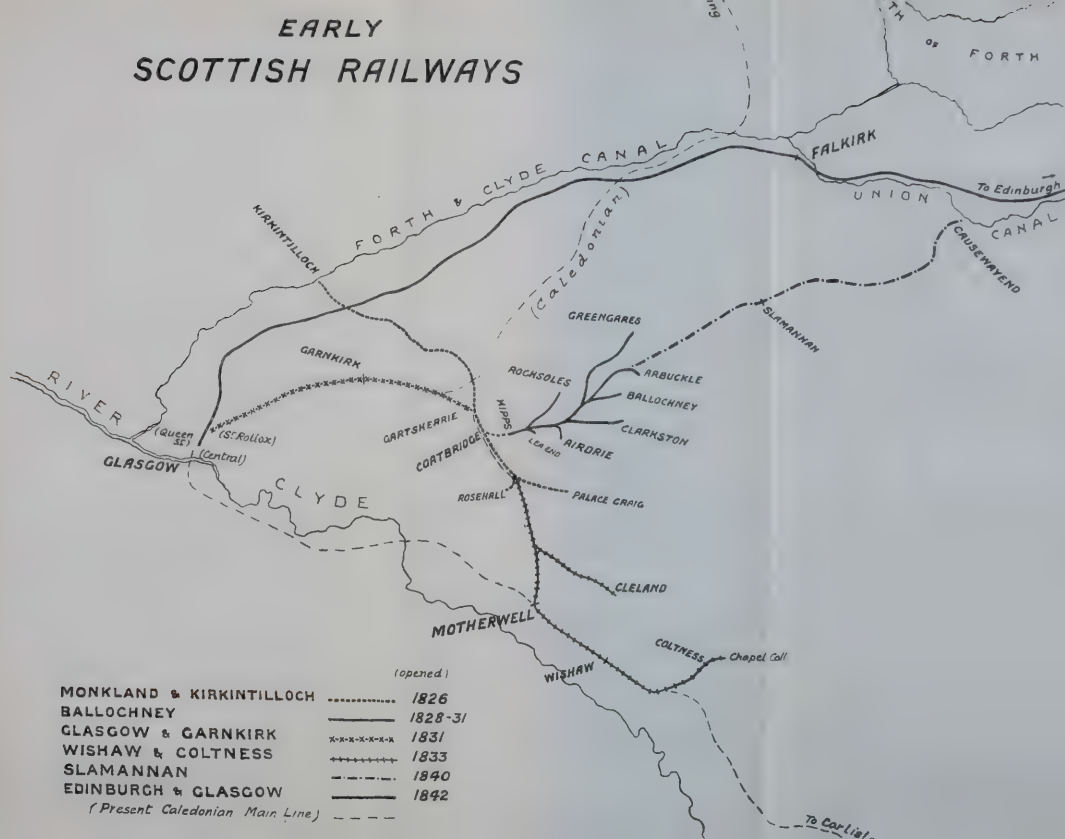
The year 1825 is notable for the opening on 1825 September 27th of the main line of the Stockton &

1825 Darlington Railway, and although upon the first day the passengers loaded on trucks were conveyed by locomotives over the line, steam traction for some years afterwards was confined to the goods and mineral trains, the passenger traffic between Stockton and Darlington being conducted by rail coaches and horses.

It was about this period that the possibilities of a general railway system throughout the Kingdom began to be seriously entertained by men of position and wealth in the business world. Considerable progress had been made in improving the locomotive in the ten years that had elapsed since Stephenson put on rail his first locomotive at Killingworth, and the more enterprising merchants began to see the dawn of a new era in transport.

The result of this feeling manifested itself in a number of rough surveys being made all over the country, and projects mooted for connecting several of the principal towns by railway; whilst it is of interest to note that the majority of the main routes which were subsequently constructed were first conceived about this year. Unfortunately, however, the country was just then going through a severe financial crisis, so that although many men of public spirit who had wealth to back them spent considerable sums of money in preliminary expenses, the state of the country was such that it was impossible to bring the projects before Parliament with any prospect of success. Thus, what might have been a railway boom in 1825 and 1826,

# EARLY SCOTTISH RAILWAYS



## EARLY RAILWAYS

OF THE

*LANCASHIRE*

DISTRICT





collapsed for want of money, and it was not until 1825 ten years later that public interest in railway projects became general.

Two small lines were, however, sanctioned this year, the **Canterbury & Whitstable**, and the **Bolton & Leigh**. The former is remarkable inasmuch as although the total extent of the line was to be only 6 miles 13 chains, three different methods of propulsion were to be adopted, viz., by locomotive, fixed engine, and horses. The latter line was intended to connect the Manchester, Bolton & Bury Canal with the Leeds & Liverpool Canal at the points named, and was designed for working by locomotive and fixed engine.

The year 1826 was responsible for the Parliamentary birth of four new railways, of which the **Liverpool & Manchester** was by far the most important. This railway was really the outcome of the exasperation of the Lancashire merchants with the excessive tolls and great delays to their goods in transit over the canals of the district. The principal canal companies, having a monopoly of the traffic, charged practically what they liked, and afforded facilities which were quite inadequate to convey the total traffic offered; moreover the congestion was aggravated by stoppage or reduced load in summer from lack of water, and in winter by ice. Hence the leading traders of Liverpool and Manchester, encouraged by the example of the Stockton & Darlington Railway now in operation, succeeded in obtaining Parliamentary consent for

1826 the construction of a line  $30\frac{3}{4}$  miles long to connect the two great Lancashire cities. Locomotives were to supply the motive power, but there was a curious stipulation in the first Act that they were not to be used in towns.

The three remaining railways to be authorized this year were all to be situated in Scotland. The **Ballochney Railway** consisted of a short main line 4 miles in length, leading from the Monkland & Kirkintilloch Railway, near Kipps Colliery, to Arbuckle, with two branches, viz., the Clarkstown branch,  $1\frac{3}{4}$  miles long, to Blackrigg Colliery, and the Whiterigg Colliery branch,  $\frac{3}{4}$  miles in length. This small system was promoted to facilitate traffic from the Monkland Coalfield to Glasgow and district. The **Glasgow & Garnkirk Railway**, sanctioned this year, was similarly intended, and was to complete the formation of an all-rail route from the collieries before mentioned to Glasgow. Its length was 8 miles 14 chains, and the line extended from a junction with the Monkland & Kirkintilloch at Cargill Company, Gartsherrie, to the borders of the Forth and Clyde and Monkland Canals in Glasgow.

The **Dundee & Newtyle Railway** completes the list of railways sanctioned in 1826. It was designed to form a connection,  $10\frac{1}{2}$  miles in length, between Dundee and the hilly country at the back, and thus facilitate the carriage of provisions from and to that important industrial town, whilst the country folk were to get the benefit of goods imported to Dundee.

The opening for public traffic of the Monkland &

Kirkintilloch Railway took place in October of this 1826 year, horse traction being chiefly employed. It is interesting to note here that although this, the first of Scottish locomotive railways, has long since become a part of the North British system, and is only now worked for goods and mineral traffic, a portion of it, 52 chains in length, *i.e.*, between Gartsherrie and Garnqueen Junctions, to-day forms part of the Caledonian Main Line to Perth and Aberdeen, that company having long ago obtained mining powers over this section.

Only one Act for a new railway marks the year 1827—that for the **Ardrossan & Johnstone Railway**, 1827

It is particularly instructive as emphasizing the transition about this period from the idea of canal to railway carriage. At the beginning of the century the difficulties of navigation in the Clyde rendered it desirable to find a means of direct access between Glasgow and the sea. A company was therefore formed to build a ship canal from Glasgow to Ardrossan, on the understanding that the harbour at the latter place should be reconstructed by the landowner, the Earl of Eglinton. Unfortunately, however, the funds of the company were exhausted when the canal, begun at the Glasgow end, had only reached Johnstone, nor was it possible to raise more money to complete the undertaking. In 1827 a new company obtained powers to cover the intervening 22 miles between Johnstone and Ardrossan by a railway. Apparently, however, financial difficulties again beset the company, as it ended by



1827 only constructing a main line from Ardrossan to Kilwinning,  $5\frac{1}{2}$  miles in length, where it joined the subsequently projected Glasgow & Ayr Railway, part of whose line took up the same route as that of the Johnstone & Ardrossan Company ; together with two short branches to Doura and Fergushill.

1828 In 1828 the **Clarence Railway** obtained its Act. This was for a main line, 14 miles in length, extending from a junction with the Stockton and Darlington line at Simpasture down to the banks of the Tees at Port Clarence, opposite Middlesbrough ; together with three branches, viz., City of Durham branch,  $10\frac{1}{4}$  miles long, from the main line at Stillington by Ferryhill to Crow Trees, Coxhoe, some 6 miles from Durham ; the Byers Green branch, which led from the preceding branch at Ferryhill to Byers Green, 6 miles away ; and the Stockton branch, leading from the main line at Norton to the River Tees at North Stockton, about  $2\frac{1}{2}$  miles off. This railway was primarily designed for mineral traffic, and in active competition with the Stockton & Darlington Railway for the traffic west of Shildon. In this connection it may be noted that during this year the Stockton & Darlington Railway obtained sanction for its extension of 5 miles to Middlesbrough, then little more than a fishing hamlet.

The year 1828 is also noteworthy as giving Parliamentary birth to the **Llanelly Railway & Dock Company**. The first Act of this company, which may be taken as the first public railway in Wales, with powers of traction by steam, was for



the construction of a dock at Llanelly, and a short 1828 railway, about 2 miles long, leading thereto from the country behind for the conveyance of minerals.

The first portion of the Ballochney Railway came into operation during this year, and was followed by the opening of various branches of this little system during the three subsequent years.

In 1829 four Acts for new Railways were passed, 1829 by far the most considerable being that for the **Newcastle & Carlisle Railway**, whereby it was proposed to make a line of the hitherto unprecedented length of 61 miles, to connect these two important northern cities. The other Acts were for the **Leigh & Kenyon Junction Railway**, whereby the missing link of  $2\frac{1}{2}$  miles between the Bolton & Leigh and Liverpool & Manchester systems was to be supplied; the **Warrington & Newton Railway**, which formed a branch of  $4\frac{1}{2}$  miles from the Liverpool & Manchester Railway to the former town; and the **Wishaw & Coltness Railway**. This latter line was a 10 mile extension of the small network of lines that was gradually springing up in the Motherwell district of Scotland, and served to tap new sources of traffic for the Monkland & Kirkintilloch and Glasgow & Garnkirk lines, with which it was connected at the north end. Thus, during 1829 about 90 miles of railway were sanctioned, a total considerably in excess of that of any previous year.

The year 1830 also witnessed the passing of four 1830 new railway projects. The **Leeds & Selby Railway**, 20 miles in length, was intended to connect the two

1830 towns named, and help the transit of raw materials for the Leeds manufacturers from Selby, then a port of some importance, as well as to facilitate the distribution of coal from the various Collieries near Leeds.

The **Wigan Branch Railway** constituted an offshoot of the Liverpool & Manchester Railway, 10 miles long, to the town of Wigan, and served a number of Collieries situated *en route*.

The **St. Helens & Runcorn Gap Railway** was an independent concern, 12 miles in length, in the same neighbourhood, passing over the Liverpool & Manchester Railway without a connection, and intended for the transport of freight from the St. Helens district to the River Mersey at Runcorn.

Lastly, we have the **Leicester & Swannington**, another coal railway, promoted in order to bring the Leicestershire coals to the county capital, 16 miles off, and compete with the Derbyshire and Nottinghamshire Collieries, from which water carriage had hitherto more than made up the disadvantage in distance.

However, the crowning railway event of this year was the opening for public traffic of the Liverpool & Manchester Railway on September 15th, from which date a service of six passenger trains ran daily between the Liverpool Road Station, Manchester, and Edghill Station, Liverpool, the average journey time being  $1\frac{3}{4}$  hours, and the average fare 5s.

The Canterbury & Whitstable has the honour of being the first passenger railway to be opened in

the South of England, that event taking place on 1830 May 3rd of this same year. Although initially a locomotive was employed in addition to winding engines for the inclines, the former was soon abandoned and horse traction substituted. This method of operation obtained until 1844, when the line was relaid for locomotives on being leased to the South-Eastern Railway Company.

Only three new railways were sanctioned during 1831 the session of 1831, the most important being the **North Union**, which formed an extension of the Wigan branch railway, authorized the previous year, to the town of Preston, 15½ miles away. Another railway in Lancashire, viz., the **Manchester & Bolton**, was projected to convert the Manchester, Bolton & Bury Canal into a railway, but it was subsequently decided to build the line parallel to the canal (which the company purchased and retained) for most of the distance of 10 miles between the two towns from which the company derived its name. Lastly, there was the first railway to be sanctioned in Ireland, that from **Dublin to Kingstown**, a distance of 5½ miles.

With regard to new openings in 1831, there are to be noted the Middlesborough branch of the Stockton & Darlington; the Dundee & Newtyle, chiefly worked by fixed engines and ropes owing to the heavy gradients; the Bolton & Leigh and Leigh & Kenyon, these latter affording through railway communication between the town of Bolton and Liverpool and Manchester. The operation of the



1831 two last named railways was undertaken by a Mr. Hargreaves, of Bolton, who found the necessary locomotive power, passenger vehicles and such goods wagons as were not provided by the private owners using the line.

This practice of leasing a line to a contractor to work was by no means uncommon in the early days of railways. It forms a natural transition stage between the first idea that the railway company should merely provide the road, leaving private parties to work over it with their own vehicles if they cared to do so, and the ultimate conclusion which soon forced itself upon the companies that they must provide the power and retain control of operation in their own hands.

Finally, in Scotland the Glasgow & Garnkirk Railway became available for public traffic. Particular interest attaches to the opening of the last-named line, as the event was responsible for the first case of inter-railway competition, the coal for Glasgow from the Coatbridge district coming by rail all the way, as against the joint rail and canal transit, *via* the Monkland line to Kirkintilloch, and the Forth & Clyde Canal thence to Glasgow. The result of railway access to this district was soon seen in reduction of the rate for the carriage of coal from the Monkland field to Glasgow from 3s. 6d. per ton to 1s. 3d. per ton.

1832 The year 1832 was a very lean one as regards railway enterprise, the country being no doubt much more taken up with the passage of the Reform Bill than with railway matters.



Two new lines, however, received the Royal Assent 1832—the **Bodmin & Wadebridge** had the honour of being the first locomotive passenger railway in the west of England, and was designed to connect the two towns named, also by the addition of a branch following the course of the River Camel to Wenford Bridge, to facilitate the distribution of river sand amongst the neighbouring farms, the total mileage being about 12, including a short branch of a mile to Ruthern Bridge. The **Hartlepool Railway & Dock** was formed for the purpose of increasing the shipment of coal at Hartlepool from the various collieries in the Castle Eden District ; the main line extended from Haswell to Hartlepool, with a branch to Thornley Colliery, some 15 miles altogether.

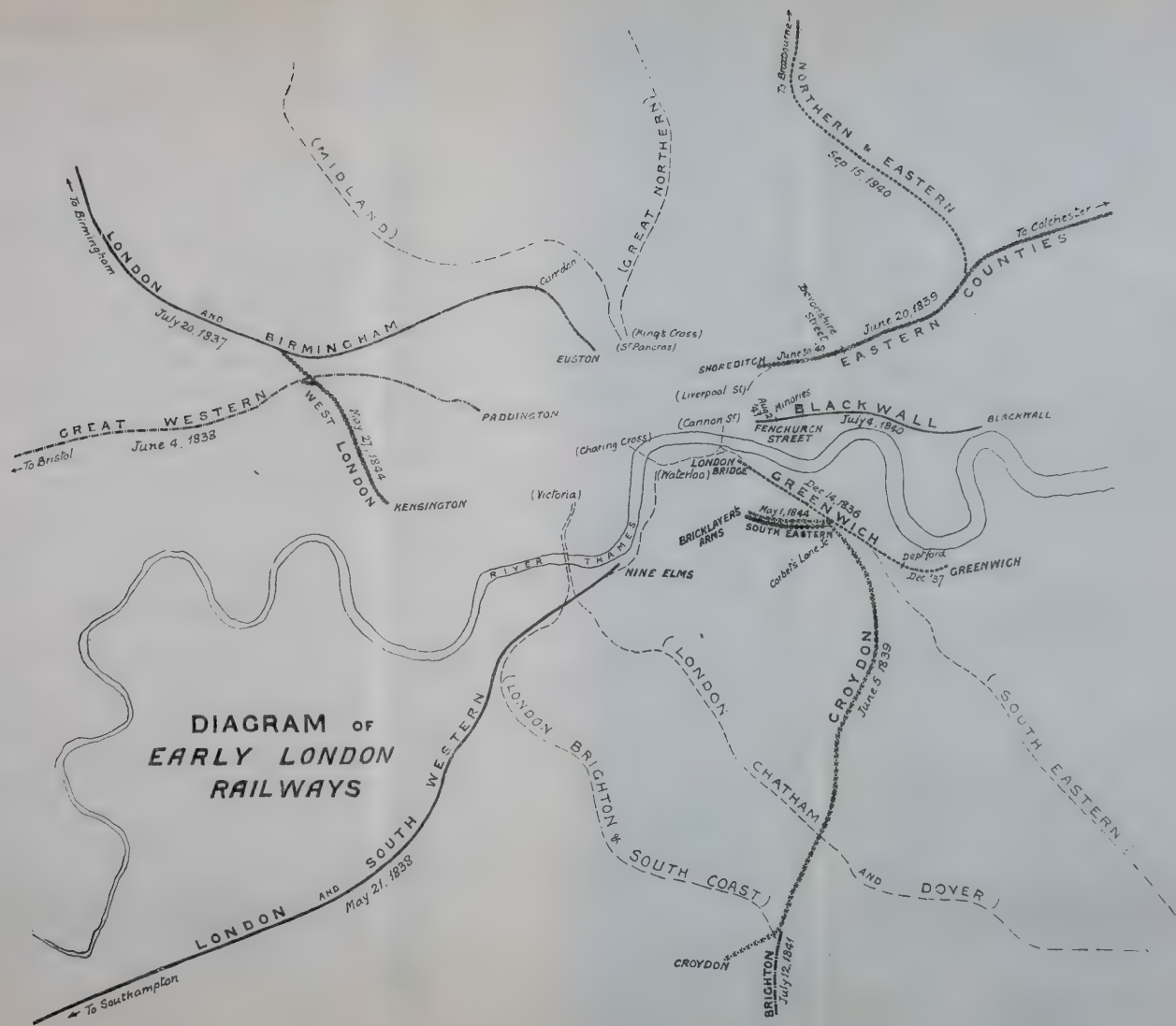
The opening of the Leicester & Swannington Railway on July 17th is of special interest, as it forms the earliest portion of what is now the Midland Railway. The Wigan branch railway was also opened during this year

In 1833, the growing confidence in railways as 1833 the future means of locomotion manifested itself by the sanction of the first great trunk through route in England. By the construction of the **Grand Junction** and **London & Birmingham Railways**, the former to connect the Liverpool & Manchester line with Birmingham, and the latter to complete the chain by a main line 112 miles long to the Metropolis, Lancashire and London were to be brought into communication by railway, as well as with the chief town of the Midlands. This year, therefore,

1833 marks an important epoch in the growth of our railways, and shews a definite advance from the stage of railways for merely local needs to that of railways for the use of long-distance travellers.

The Grand Junction Railway started from the end of the Warrington branch railway, previously alluded to, and passed in a southerly direction through Crewe and Stafford to the outskirts of Wolverhampton, whence it turned east *via* Walsall to Birmingham, passing round the north side of the city to a terminus at Curzon Street, adjacent to that proposed for the London & Birmingham Railway. The Warrington branch railway, opened this year, was absorbed by the Grand Junction, and thus the total length of its line from Newton, the junction of the London & Manchester, to Birmingham was 83 miles. The London & Birmingham line was rather more direct, but the nature of the country made it more difficult of construction, and the opposition of the people of Northampton to the idea of a railway near their town necessitated the making of the Kilsby tunnel, 2,398 yards in length, thereby adding greatly to the expense of the undertaking.

The only other railway sanctioned this year was a purely local one,  $3\frac{3}{4}$  miles long, between London Bridge and **Greenwich**, a special feature of which was the fact that it was to be built on arches for practically the whole distance, so as to avoid interference with the traffic in the numerous streets to be crossed, and in the hope that many of the







arches would be used as warehouses or dwelling places for the poorer classes of the neighbourhood through which the line passed. 1833

Thus in the year 1833 for the first time we get more than 100 miles of new line receiving Parliamentary sanction, the mileage of the three lines previously mentioned amounting to a total of 198.

With regard to new lines opened during this year, the little cluster of lines in the Motherwell district of Scotland is augmented by the opening of the Wishaw & Coltness; in the Durham district, the Clarence Railway main line from the Stockton & Darlington Railway at Simpasture Junction to Port Clarence, with the Stockton branch, commenced operations; while in the Lancashire district the St. Helens & Runcorn Gap, as well as the Warrington branch previously alluded to, became available for public traffic. Lastly, the little Llanelly Railway made a start in South Wales with its 2 miles of main line.

In the year 1834 a second trunk route was authorized, this time in a south-westerly direction; thus by means of the **London & Southampton Railway** it was intended to connect the places named with one another by a line 77 miles long. Two new lines were authorized in the Durham district, viz., the **Durham Junction**, an offshoot of the Stanhope and Tyne at Washington to Rainton, 5 miles southwards, and the **Durham & Sunderland**. This latter company was promoted to make a railway from Shincliffe to Sunderland, with a 1834

1834 branch from Murton to join the Hartlepool Railway at Haswell; and the intention was to work the whole of the 16 miles by means of fixed engines and ropes.

A considerable addition was made this year to the mileage already in operation, especially in the Durham district. The **Stanhope & Tyne Railway** was brought into use in two sections, that from Stanhope to Annfield, 16 miles, on May 15th, and the remainder from Medomsley to South Shields, 22 miles, on September 10th. This remarkable railway was constructed on the "wayleave" principle, and was not in fact incorporated until 1842, when its name was changed to the "Pontop & South Shields Railway." It passes, for the most part, through wild moorland country intersected by steep ravines, the gradients being such that locomotive working was only possible on the section of line east of Washington, the remainder being worked by self-acting inclines and fixed hauling engines. Part of the original system has now been abandoned, but the eastern portion, including the Stella Gill inclines, forms one of the busiest mineral lines in the kingdom at the present day. The Coxhoe to Stillington, or City of Durham branch of the Clarence railway, was brought into use this year, and a passenger service instituted between Coxhoe and Stockton, which seems to have been worked intermittently by steam or horse traction by a contractor. The Leeds & Selby Railway was opened on September 22nd, from Marsh Lane Station, Leeds,

to Selby, and a considerable coal traffic immediately developed over it from the pits in the Garforth district. The Bodmin and Wadebridge Railway came into operation on September 30th, with a passenger train service in each direction on alternate days !

In Ireland, the opening of the Dublin & Kingstown Railway gave the inhabitants their first opportunity of seeing the locomotive at work in their own country.

The year 1835 witnessed the successful promotion of the third of our earliest great trunk routes, this time to the west of England. The **Great Western Railway** was to form a line 118 miles long to connect London with Bristol and Bath. Originally it was intended to join the London & Birmingham Railway near the present Willesden Junction and use the same London terminus as that company at Euston, but fortunately this project was never carried out. A separate terminus at Paddington was therefore decided upon, although the idea of the original scheme is traceable to-day in the bend of the line towards Willesden in what might otherwise have been a straight course. By the side of this great scheme (the longest main line hitherto projected by one company) the remaining lines authorized are insignificant, although five new companies obtained their Acts during this year.

The **Preston & Wyre** line proposed to continue railway communication from the terminus of the North Union at Preston, 20 miles in a north-westerly



1835 direction to the fishing hamlet of Fleetwood, and to establish a harbour and docks at that place, from which a line of steamers could advantageously run to Belfast and Glasgow. In the County of Durham, the **Brandling Junction Railway**, 15 miles long, was to connect Gateshead with South Shields and Sunderland, and was named after the principal promoters, Messrs. J. and R. W. Brandling, whose original idea was to make the railway as a private undertaking in their own hands. In the Metropolis, the **London & Croydon Railway** was to connect the latter town with the London & Greenwich Railway, and utilize the bed of the Croydon Canal, which was to be drained for the purpose. In Scotland, the **Slamannan Railway** was to continue the communication afforded by the Ballochney Railway on to the Union Canal at Causewayend, about 13 miles further, serving various collieries en route. A small isolated railway of  $3\frac{1}{4}$  miles in length was also authorized, connecting the towns of **Paisley and Renfrew**, on the Clyde.

Very little in the way of new openings can be chronicled in 1835, the mileage being confined to the first portion of the Newcastle & Carlisle, 17 miles in length, from Blaydon to Hexham, and the Hartlepool Railway from Thornley and South Hetton to Hartlepool. The latter line includes a very steep bank at Hesleden, originally operated by a fixed engine and ropes, but since improved so as to be workable by locomotives.

1836 A period has now been reached when locomotive



[illegible]

ways previously sanctioned and under construction.

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

Great Britain  
Manchester and London

English and Wayne

Railway sanctioned in 1836, and subsequently constructed

Full Sale  
Sheffield and Featherston.

**Northern and Eastern  
Midland Legumes**  $d_{\text{LH}} = 0.000$  .....  $d_{\text{LH}} = 0.000$

Samuel and Sam Shalika  
York and North Midland

**Eastern Division**  
Wachsmuth and Smith

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railways may be said to be emerging from the 1836 experimental stage.

The increasing financial success of the Liverpool & Manchester and other steam railways, together with the approaching completion of the great trunk line from Lancashire to London, had begun to arouse public interest in railways as a possible form of investment from which good profits could be derived. In consequence of this feeling, and the favourable condition of the money market at that time, a regular boom in railways set in about the year 1836, with the result that during this year Parliament authorized 29 new schemes for providing railway communication in the United Kingdom, involving the construction of some 1000 miles of new line, the great majority of which was duly completed. Since 1821, the date of the passing of the Act for the first locomotive passenger railway (the Stockton & Darlington), in a period of 15 years 37 Acts for new railways had been authorized, giving an approximate total of 860 miles of line (*see* diagram). Hence the proposals for the year 1836 promised to add new railways exceeding in mileage the total hitherto authorized.

Taking these proposals in detail, and dealing only with such lines as were subsequently constructed, at least in part, we find in the **Eastern Counties Railway** a project to make a line the length of which surpassed that of any one undertaking as yet contemplated. The main line was to extend from Shoreditch to Yarmouth and Norwich, *via* Colchester

1836 and Ipswich, a total of 126 miles. A separate concern, the **Northern & Eastern**, was to make a junction with the Eastern Counties at Stratford, and extend for 30 miles from that point in a northerly direction to Bishop Stortford *via* Broxbourne, with the subsequent intention of obtaining further powers whereby this line might be continued to Cambridge.

Thus were the Eastern Counties, hitherto devoid of railway communication, to be provided for.

In the Midlands, the **Midland Counties Railway** proposed to connect the London & Birmingham Railway at Rugby with the towns of Derby and Nottingham, passing through Leicester and Loughborough, involving the construction of 58 miles of new line. Communication north of Derby was to be supplied by the **North Midland Company**, whose line was to pass through Clay Cross, Chesterfield, Rotherham and Normanton in its course of  $74\frac{1}{2}$  miles between Derby and Leeds. A small separate company, the **Sheffield & Rotherham**, was to cover the 6 miles intervening between Rotherham and the cutlery city. A direct line between Derby and Birmingham was to be provided by the **Birmingham & Derby Junction**, while access further west was to be provided by the **Birmingham & Gloucester Company**, which company in its turn was to be joined at Gloucester by the **Cheltenham & Great Western Union Company**, whose line extended from a junction with the Great Western at Swindon, and included a branch to the town of Cirencester. As



between Cheltenham and Gloucester, the railway 1836 was to be common between the two latter companies, and the route of the old Cheltenham & Gloucester horse railway, which obtained its Act in 1809, was utilized, the road being relaid for the purpose.

The west of England was to be served by the **Bristol & Exeter Railway**, whose line was to connect those two places, and included short branches to Weston-super-Mare and Tiverton.

In the south, communication between London and Dover was to be provided by the **South-Eastern**, whose line was to extend from Redhill to Dover. The intervening portion between Croydon and Redhill was to be constructed by the Brighton and South-Eastern Companies jointly, but partly owing to the number of conflicting schemes brought forward for the exact route to be followed by the London & Brighton Company's line, that company's Bill did not pass during the 1836 session, though it was successful next year; thus the South-Eastern Company's project was temporarily saddled with a "dead-end" at each extremity.

In the north, through communication between London and Newcastle was to be carried on by means of the **York & North Midland**, covering the 24 miles between Normanton and York, while the **Great North of England**, with a main line 78 miles long, was to extend from York to Gateshead *via* Darlington and Durham.

The **Manchester & Leeds**, by a somewhat circuitous route of about 50 miles in length *via* Roch-

1836 dale, Todmorden and the Calder Valley, was to connect the manufacturing towns on each side of the Pennine range, joining the North Midland at Normanton; and by means of the **Hull & Selby Railway**, 30 miles long, the chain of railway communication between the great ports of Hull and Liverpool was to be completed, although it should be noted that at present it was not proposed to fill the space in the city of Manchester intervening between the Liverpool & Manchester Station at Liverpool Road and the Manchester & Leeds Station at Oldham Road, on the opposite side of the town.

The new railways in England of lesser importance sanctioned in 1836 comprise the **Newcastle & North Shields**, the **Fleetwood, Preston, & West Riding Junction** (which in spite of its title only resulted in a little local line,  $8\frac{1}{2}$  miles in length, from Preston to Longridge), the **Aylesbury**, and two local London lines, the **London & Blackwall** (or Commercial) and the **Birmingham, Bristol & Thames Junction**. The principal object of the London & Blackwall line was to convey steamboat passengers straight from the docks at Blackwall to the City, and thus save the delays inseparable from the large bend of the River Thames at this point and the crowded navigation of the river in the vicinity of the Pool. The promoters of the Birmingham, Bristol & Thames Junction were more ambitious, and by making a short line 3 miles in length from Kensington to the London & Birmingham Railway near Willesden,

together with a junction with the Great Western at the crossing of the latter line, hoped to provide a west end terminus for passengers to and from those systems. By the purchase of the Kensington Canal and following the example of the London & Croydon Company in substituting rail for water, it was intended to gain access to the River Thames at Chelsea ; while a further extension from Kensington to Knightsbridge was strongly advocated, but was never carried out owing to the great financial difficulties encountered by the company almost from its conception.

In Wales, the **Taff Vale Railway** was sanctioned, thus providing a direct line from the works and pits in the vicinity of Merthyr Tydfil to the port of Cardiff, the scheme with small branches comprising 41 miles of new line.

In Scotland, the **Dundee & Arbroath Railway** was to connect the two towns named, and continued by means of the **Arbroath & Forfar Railway**, access was provided to the latter place, 32 miles from Dundee. The **Edinburgh, Leith & Newhaven Company** proposed to construct  $2\frac{1}{4}$  miles of local line in the suburbs of the Scottish capital.

Lastly, Ireland was represented by two railways, the **Ulster Railway**, which proposed to connect Belfast with Armagh, 36 miles distant, and the **Dublin & Drogheda**, a line running 32 miles in a northerly direction from Dublin.

It will readily be seen from the foregoing that the first serious attempt was being made in this year to



1836 give the more important places in England the advantage of railway facilities, and this was to be done entirely by private enterprise, without assistance in any direction from the Government. To this fact we may attribute the somewhat haphazard way in which the early railways were scattered about the country, and the absence of any indication of a general scheme for laying out the railways of this country to the best advantage, such as took place, for instance, in France under the auspices of the State. Those who were willing to take the risk of investing their money in the early railways naturally looked for a substantial and immediate return for their enterprise, and were more concerned with preserving the field of operations for their own particular company than in considering the general problem of the lines on which the railway system should in future be developed for the benefit of the community at large. Thus, for better or for worse, the nucleus of our present system of railways may be traced in the railways sanctioned in the Parliamentary session of 1836.

The new mileage brought into operation this year is comparatively unimportant. On June 28th the first section of Newcastle & Carlisle Railway was extended  $7\frac{1}{2}$  miles from Hexham to Haydon Bridge, while on July 19th public traffic was started at the other end of the line by the opening of the 20 mile section from Carlisle to Greenhead. The first portion of the Durham & Sunderland Railway from







the South Docks to Murton, 7 miles, came into operation on August 9th. 1836

In Scotland, the Johnston & Ardrossan line was opened on June 10th, though as yet only worked by horse power. At the close of the year the inhabitants of London had the opportunity for the first time of seeing a railway working in their midst, for in December the London & Greenwich Railway commenced carrying passengers for the  $3\frac{1}{4}$  miles between London Bridge and Deptford.

Turning to the year 1837, the influence of the boom of the previous year is still in evidence, with the result that some 450 miles of new line were passed by the legislature, amongst which are included some schemes unsuccessfully introduced to Parliament during the previous session. 1837

The project involving the longest mileage was that of the **Manchester & Birmingham Railway**, for a line from Manchester to join the Grand Junction at Chebsey, a short distance north of Stafford, which, together with branches to Crewe and Macclesfield, made up a distance of 72 miles. It was apparent that the circuitous route between Birmingham and Manchester over the Grand Junction, Liverpool & Manchester Railways *via* Newton Junction must be improved in order to properly deal with the large traffic that must develop between Manchester and the south, and several proposals were set on foot to achieve this object, those finding most favour being the Manchester & Birmingham and Churnet Valley schemes. The Grand Junction, however, was



1837 naturally loth to lose a considerable part of its prospective traffic, and for a time successfully opposed all its rivals. Eventually, after several Parliamentary contests, a compromise was arrived at whereby the Manchester & Birmingham scheme, sanctioned this year, was cut down to a line from Manchester to Crewe *via* Stockport and a branch to Macclesfield, reciprocal running powers being granted to each company over the lines of the other.

Another very important scheme was that for the **London & Brighton Railway**, which failed to obtain its Act in 1836. This line was to extend from the Croydon Railway *via* Redhill (from which point the South-Eastern Railway was to start, as previously noticed) to Brighton, with branches to Shoreham and Newhaven, a total extent of 61 miles.

The activity of the Lancashire district was again shown by the sanction of the **Lancaster & Preston Junction Railway**, which amounted to a 20 mile extension of the North Union ; the **Chester & Crewe** and **Chester & Birkenhead** Companies, 20½ and 14½ miles in length respectively, and the **Bolton & Preston Railways**. The last-named was originally intended to carry the communication provided by the Manchester & Bolton Railway on to Preston by an independent line throughout some 20 miles in length, but owing to the opposition of the North Union Company, who regarded the Bolton & Preston Company in the light of an invader, the latter line was curtailed at the northern end, and a junction formed with the North Union at Euxton, access being



obtained by running powers for the last  $5\frac{1}{2}$  miles <sup>1837</sup> into the town of Preston over the rails of the North Union Company. A second east and west route through the Pennine range was authorized by the Act for the **Manchester & Sheffield Railway**, 40 miles in length.

In the Durham district, the **Bishop Auckland & Weardale Railway** practically formed a 20 mile extension of the Stockton & Darlington from Shildon up the Wear Valley to Frosterly with a branch to Crook, while the **Great North of England Clarence & Hartlepool Junction Railway** was intended to fill in the gap of 8 miles between the systems from which the company derived its title. In Cumberland, the **Maryport & Carlisle** was to connect the places named by a line 28 miles long.

The Birmingham & Gloucester Company obtained powers to make a short branch of 2 miles from Ashchurch to Tewkesbury, and the Great Western Act of 1837 authorized a deviation from the original proposal and extension to a separate terminus at Paddington, instead of joining up with the London & Birmingham.

In Scotland, two important lines were successfully projected to join Glasgow with the sea coast. The **Glasgow, Paisley, Kilmarnock & Ayr** had a main line of 40 miles in length between Glasgow and Ayr, covering as between Johnstone and Kilwinning the route of the unfortunate Ardrossan & Johnstone Railway previously noticed. A branch from Dalry to Kilmarnock was also included in the scheme,

1837 while the  $6\frac{1}{2}$  miles between Glasgow and Paisley was to be constructed and used jointly with the **Glasgow, Paisley & Greenock Company** whose line from Paisley was to follow the south bank of the Clyde for most of the 17 miles thence to Greenock.

In Ireland, a trunk railway 73 miles in length was sanctioned from Dublin, reaching in a south-westerly direction to Kilkenny, under the title of the **Great Leinster & Munster Railway**, while the **Cork & Passage Railway** constituted a little local line 6 miles in length.

Reviewing the successful projects for the year 1837 as a whole, it is noticeable that the majority are complementary to or form natural extensions to the system of railways sanctioned up to the end of 1836. From this date, therefore, until the end of the period dealt with in this book the new railways proposed become of less importance, whereas the actual openings become of greater interest.

In connection with the latter phase of railway development, the year 1837 is remarkable for the opening of our first great trunk line, the Grand Junction, as well as for a portion of its sister company, the London & Birmingham. The Grand Junction was opened throughout on July 4th, an unusual proceeding in those days with an undertaking of such magnitude. From this date through passenger trains were run between Birmingham and Manchester and Liverpool *via* Newton Junction, giving an approximate journey time of  $4\frac{1}{2}$  hours between Birmingham and these great Lancashire

towns, and such was the popularity of the railway <sup>1837</sup> that the available locomotives were fully occupied in dealing with the coaching traffic during the first few months of its operation; hence the company did not commence to carry goods traffic until the following year, after the locomotive power had been augmented. It is interesting to note that the officials of the Post Office were fully alive to the advantages of the new form of transit, and made immediate use of the Grand Junction Railway for mails, with the result that letters dispatched from London by coach at 8 p.m. to Birmingham were delivered in Liverpool before noon the next day.

The opening of the first portion of the London & Birmingham Railway quickly followed that of the Grand Junction, the  $24\frac{1}{2}$  mile section between Euston and Boxmoor being available for public traffic as from July 20th, while on October 16th the extension of  $7\frac{1}{4}$  miles to Tring was completed. The greater difficulty of the character of the works necessary for the construction of the London & Birmingham Railway was responsible for the tardy completion of this line compared with the Grand Junction. A good instance of this difference is to be found in the fact that on the London & Birmingham three tunnels exceeding 1000 yards in length had to be encountered at Primrose Hill, Watford, and Kilsby, whereas the construction of the Grand Junction required no tunnel at all.

Very little else in the way of new lines opened remains to be chronicled for this year. The New-



1837 castle & Carlisle made short extensions at each end of its system, viz., to the canal basin at Carlisle, 1 mile in length, and from Bloydon to Redheugh, on the south bank of the Tyne opposite Newcastle,  $3\frac{1}{2}$  miles distant. The Byers Green branch of the Clarence Railway appears to have been brought into operation this year, adding 5 miles to this company's system, while in Scotland the short Paisley & Renfrew started operations, the passenger traffic being worked by horse power. Thus, owing to the 78 miles stretch of the Grand Junction, the new mileage brought into use in any one year for the first time in the history of our railways exceeded 100, the total for 1837 in fact amounting to about 125 miles.

The reaction following upon the boom had now 1838 set in, with the result that in 1838 only two new railways were authorized. Scotland, indeed, boasted a scheme of first-class importance, viz., a railway to connect its two principal cities of **Edinburgh & Glasgow** by a line 47 miles in length; but the insignificant **Taw Vale Railway**, a purely local line of little more than 2 miles in length in North Devon, was the sole English representative.

The new railways opened during this year, however, marked a great advance in the facilities for travelling throughout the country.

The London & Birmingham Railway was pushed forward  $16\frac{1}{2}$  miles from Tring to Denbigh Hall on April 9th, on which date also the western portion of  $29\frac{1}{2}$  miles from Birmingham to Rugby was made



available for public traffic. The missing link of 1838 34½ miles, between Rugby and Denbigh Hall, involving the completion of the great Kilsby tunnel, was brought into use on September 17th, from which date through railway communication was available between the Metropolis and Liverpool and Manchester.

The advantages afforded by this great railway chain did not end here, for on October 22nd the North Union Railway from Wigan to Preston, 15 miles, was opened, thus by the end of the year a great north and south route, 220 miles in length, was afforded to the public, who were not slow to take advantage of the new facilities offered.

The second of our early trunk lines, too, gave substantial indication of its existence, for on May 21st the London & Southampton Railway was opened from Nine Elms to Woking, 23 miles from the terminus, and was extended a further 15 miles to Shapley Heath, near Winchfield, on September 29th.

The Great Western also made a start by opening its line for the first 22½ miles from Paddington to Maidenhead (Taplow) on June 4th, the rails being laid on the broad, or 7 ft., gauge, at the instance of their famous engineer, Isambard Kingdom Brunel.

On the Newcastle & Carlisle Railway the missing link of 12 miles, between Greenhead and Haydon Bridge, was completed on June 18th, from which date through railway communication was for the first time afforded across England, by a route approximately parallel to the old Roman wall.

1838 Local railways to be opened this year included the Manchester & Bolton, 10 miles, in May; the Sheffield & Rotherham, 6 miles, on October 31st; the Durham Junction (from Washington to Rainton), 5 miles, on August 24th; the Dundee & Arbroath, 14½ miles, from Craigie, outside Dundee, to Arbroath, on October 6th, and lastly the London & Greenwich ½ mile extension from Deptford into Greenwich. These lines call for no particular remark, with the exception of the Durham Junction, whose works included a particularly fine viaduct over the River Wear near Penshaw, called the Victoria Bridge, in honour of the Queen's Coronation, and which for many years formed part of the main East Coast route to the north.

The total mileage opened during the year 1838 therefore exceeded 200, amounting to nearly double that of the previous year. (*See diagram.*)

1839 The results of the Parliamentary session of 1839 were but slightly better than those of the previous year as regards new railways, the total mileage only amounting to 50 odd miles, shared by three different companies.

The **Bristol & Gloucester Company** was to provide a direct route from Bristol to the north, of which the portion beyond Gloucester was already approaching completion. By utilizing the Cheltenham & Great Western Union line for the last 7 miles, from Standish Junction to Gloucester, and relaying the old Coalpit Heath horse railway, sanctioned in 1828 as a locomotive line, the actual new mileage of

this scheme was reduced to 22. A great contro- 1839  
versy arose as to whether this company should be constructed on the broad or narrow gauge, its original intention of forming a north and south route as an extension of the Birmingham & Gloucester marking it as a narrow gauge concern, while its actual termination at Bristol and Standish meant junctions with two broad gauge lines. Eventually it was, in the first instance, constructed on the broad gauge principle under the auspices of Mr. Brunel.

The Gosport branch of the **London & South-Western Railway** (which title the London & Southampton Railway assumed this year) was to serve the town of Portsmouth by an extension of 16 miles from the main line at Bishopstoke to Gosport. The long standing rivalry between Southampton and Portsmouth manifested itself strongly when the question of providing these towns with railway facilities arose, and as soon as the London & Southampton Railway scheme was successfully launched the inhabitants of the naval port projected a direct Portsmouth and London line. The expense of constructing such a line through very heavy country proved a serious drawback, while it was felt that for some years to come, at any rate, Portsmouth could be efficiently served by a branch of the London & Southampton. The latter course was, therefore, wisely adopted on condition that the hated name of Southampton should be removed from the title of the railway company serving both places.



1839 The only other new company obtaining an Act this year was the **West Durham**, which constituted a  $5\frac{1}{2}$  mile extension of the Clarence Company's Byers Green branch, and was to be worked by ropes and fixed engines on account of the switchback nature of the country traversed.

The results achieved in the sessions of 1836 and 1837 began to show in the many new lines opened in part at any rate during the year 1839. Of the older schemes, however, the Newcastle & Carlisle was finally completed on May 21st by an extension 3 miles long from Blaydon across the Tyne to a terminus in Newcastle proper on a site now occupied by the Forth Goods Station of the North-Eastern Railway. In the same month the Durham & Sunderland Company started public traffic over the remaining portion of their line, *i.e.*, from Murton to Shincliffe, 8 miles, and the  $2\frac{1}{2}$  mile extension from Murton to join the Hartlepool Railway at Haswell. Again, on March 18th this latter company was brought into touch with the Clarence Railway near Ferryhill by the opening of the Great North of England Clarence & Hartlepool Junction.

Considerable progress was made by the London & South-Western Company, who opened a further 8 miles to Basingstoke, and a southern portion of their line from Southampton to Winchester, 12 miles, on June 10th, thus leaving only the 19 mile gap between Basingstoke and Winchester for completion.

Progress on the third great trunk line, the Great Western, was slow, and so far as the travelling



public were concerned was confined to the 7 mile extension from Maidenhead (Taplow) to Twyford. On June 5th the London & Croydon Company commenced public operations with a passenger service between West Croydon and London Bridge, a distance of  $10\frac{1}{2}$  miles, the last  $1\frac{3}{4}$  miles of the journey being made over the metals of the London & Greenwich Company. As the latter company were running a quarter-hourly service in each direction, the junction at Corbet's Lane was even then a busy place. The points were of course worked by hand, but a sort of lighthouse was erected at the spot from which a lantern showed a white light for Greenwich trains to pass, and a red light for Croydon trains, this being the first authenticated case of any system of junction signalling.

Of the projects sanctioned in 1836, the Eastern Counties made a humble beginning by opening a  $10\frac{1}{2}$  mile stretch from a temporary terminus at Devonshire Street, to Romford on June 20th.

The other large undertakings which began work in a small way were the Midland Counties Company, who opened their line of 16 miles between Derby and Nottingham on June 4th; the Manchester & Leeds, as between Oldham Road Station, Manchester, and Littleborough, 14 miles, on July 4th; and the Glasgow, Paisley, Kilmarnock & Ayr, whose commencement as a public carrier was confined to its southern extremity from Ayr to Irvine, 11 miles, on August 5th.

The Birmingham & Derby Junction followed the

1839 example of the Grand Junction in opening the whole of its line from Derby to Hampton Junction, 39 miles distant, simultaneously, the event occurring on August 12th. It should here be noted that the original intention of the company to <sup>v</sup>/<sub>i</sub> connect Derby and the North with Birmingham and the West was not directly carried out, as on second thoughts the directors conceived the idea that to compete with the Midland Counties Railway for the traffic passing between London and the North would be more profitable than to merely confine their attention to their legitimate North and West traffic. Hence at the last moment Parliamentary powers were obtained to make a line from the original main route at Whitacre to join the London & Birmingham at Hampton, and the portion of the original route, from Whitacre to Birmingham, was temporarily neglected.

That portion of the York & North Midland Railway extending some 15 miles from York to a junction with the Leeds & Selby Railway near Milford, was opened on May 30th, and a service of passenger trains immediately established between York, Leeds and Selby, while a considerable traffic started in coal from the Garforth Pits to the Cathedral City.

In the Newcastle District a great advance in travelling facilities took place. Apart from the extension of the Newcastle & Carlisle Railway, to which allusion has already been made, the Newcastle & North Shields Railway was opened throughout

from Manors to North Shields, 7 miles distant, on June 18th. Again, the Brandling Junction began to operate trains for the public on June 18th, as between South Shields and Monkwearmouth, 6 miles away. This was followed, on September 5th, by the completion of the system between Gateshead and South Shields, *via* Brockley Whins, and a direct connection to the Sunderland line. Including the Wearmouth Dock branch, about 8 more miles were thus brought into use. A connection between the Newcastle & Carlisle line at Redheugh and the Brandling Junction Railway was also made this year, but used only for freight traffic. This short link involved a very steep incline of 1 in 20 up the "Rabbit Banks," since the Redheugh station was situated but slightly above river level, whereas the Brandling Junction line was on the high ground in Gateshead. This historic incline, at first worked by stationary engine and rope, and afterwards by two or more pilot engines, has quite recently been rendered unnecessary by the construction of a deviation line, and is therefore now abandoned. Minor openings include the Aylesbury Railway, an offshoot 7 miles long of the London & Birmingham, by which company it was worked; the Greaseborough branch of the Sheffield & Rotherham; and a 3 mile extension of the Llanelly Railway towards Pontardulais. The Arbroath & Forfar Railway was opened on January 3rd, and the Dundee & Arbroath completed by the extension of  $2\frac{1}{2}$  miles from its temporary terminus into Dundee on June 24th. 1839



1839 Lastly, in Ireland the first portion of the Ulster Railway, from Belfast to Lisburn, 8 miles in length, was started for public traffic on August 12th.

It will thus be seen that about 220 miles of new railway were brought into operation in the year 1839, thus slightly exceeding the total of the previous year.

1840 In the year 1840 the low water mark of railway enterprise is reached, for in that year not a single new railway company was promoted. A period of financial depression had set in after the boom of 1836, and it was only with great difficulty that some of the concerns then authorized obtained money to complete their undertakings. The view was largely held that all the railways which could be hoped to pay had now been made or were at any rate in course of construction; in fact, the more pessimistic section of the public interested in railways went so far as to suggest that the promotion of new lines had been overdone, giving as an example the needless expenditure of capital incurred by the Great Western and London & South-Western Companies in building lines nearly parallel from London to Reading and Basingstoke. However, if the stagnation in the promotion of new lines in 1840 is to be lamented, we have at the same time to record the opening of a number of new railways whose mileage together more than double the total of any year within the period under review—a natural result of those years in which we have seen the zeal for railway promotion so rife.



# RAILWAY MAP

**Shewing Railways opened to traffic in the year 1940**

## LIST OF PRINCIPAL RAILWAYS

- [illegible]



РАМ ЯАУЛІА

СЛАВ ДНА ДИДІДІ

СЛАВ ЯАУЛІА ДНА ДИДІДІ

СЛАВ ЯАУЛІА ДНА ДИДІДІ  
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СЛАВ ЯАУЛІА ДНА ДИДІДІ

Taking the original trunk lines first, the opening 1840  
 on May 11th of the 19 mile portion between Basing-  
 stoke and Winchester completed the main line of the  
 London & South-Western Railway throughout. The  
 Great Western, in contrast to the leisurely progress  
 hitherto recorded, made considerable strides, ex-  
 tending 5 miles to Reading on March 30th, thence  
 to Steventon,  $20\frac{1}{2}$  miles, on June 1st, on to Far-  
 rington Road, 10 miles, on July 20th, and finally to  
 Hay Lane, 13 miles further, near Wootton Bassett,  
 on December 16th. A start was also made at the  
 western end of the system by the opening of the  
 Bristol to Bath section,  $11\frac{1}{2}$  miles in length, so that  
 at the end of the year the 27 mile stretch between  
 Bath and Hay Lane alone remained to be completed,  
 this part including the famous Box Tunnel.

Perhaps the most striking of the new lines to be  
 opened this year were the Midland Counties main line  
 and the North Midland, as the completion of these  
 systems led to the first case of fierce competition  
 between rival companies for passenger traffic on  
 lines in operation. The Midland Counties Company  
 commenced public traffic over the 21 mile section  
 from Trent to Leicester on May 5th, and on June 30th  
 the remaining 20 miles to Rugby was brought into  
 operation; meanwhile the North Midland line was  
 opened for the 40 miles between Derby and Rother-  
 ham on May 11th, and the remaining 33 miles  
 completed to Leeds on the same date as the final  
 section of the Midland Counties. This was the  
 signal for a great fight between the Birmingham &



1840 Derby Junction and the Midland Counties for the traffic between London and Derby, and places north thereof.

The Birmingham & Derby Junction had the advantage of being first in the field, having, as we have seen, opened to Derby in the previous August. The Midland Counties however, had the shorter route by about 9 miles, and had made an agreement with the North Midland prior to opening whereby the latter company should hand all its South traffic to the Midland Counties, but on the appeal of the Birmingham & Derby Junction, the Law Courts set it aside as being *ultra vires*. Thus a violent and unrestrained competition set in between the two companies, involving rate cutting which neither company could properly afford (at one period of the contest the Birmingham and Derby Company only charged 2s. for a first-class through passenger between Derby and Hampton, as against the local fare of 8s.). Space does not permit of a full account of the various phases of this interesting event in early railway history; suffice it to say that after many futile endeavours to arrange terms a solution was ultimately come to in 1844, whereby the three companies interested were all amalgamated as one concern under the title of the **Midland** Railway.

The completion of the York & North Midland Railway from Milford to Burton Salmon, on May 11th, and on to join the North Midland at Altofts, on June 30th, afforded a through railway route for the first time between London and York, and on the



same date the Hull & Selby line was brought into 1840 operation, and the great East Coast port brought into touch with the rest of the railway system.

Of railways already partially opened the Eastern Counties abandoned its temporary terminus at Devonshire Street in favour of a station at Shore-ditch, one mile nearer the City, and on the same date, June 30th, extended its operations to Brentwood, 6 miles from Romford, its previous termination.

The Manchester & Leeds opened on October 5th, from Normanton to Hebden Bridge, a distance of 27 miles, leaving a gap of 10 miles between that place and its western portion at Littleborough to be subsequently finished.

New companies opened throughout include the Lancaster & Preston Junction,  $20\frac{1}{2}$  miles, on June 25th; the Preston & Wyre, from Fleetwood to Preston,  $19\frac{1}{2}$  miles, on July 16th; the Chester & Birkenhead, 14 miles, on September 23rd; and the Chester & Crewe,  $18\frac{1}{2}$  miles, on October 1st, the last-named having been absorbed by the Grand Junction. The important Birmingham & Gloucester line was opened in sections, that of the first portion of  $33\frac{1}{2}$  miles between Bromsgrove and Cheltenham taking place on June 24th, to be followed, on September 17th, by an extension of  $7\frac{1}{2}$  miles northwards to a temporary station at Cofton Farm, which in turn was abandoned on December 17th, when the line was taken the remaining 6 miles into Camp Hill Station, Birmingham. The southern end of this system, which, it will be remembered, was to be

1840 shared by the Great Western & Cheltenham Union, was opened from Cheltenham to Gloucester on November 4th.

A start was made by the London & Brighton Company on May 11th with its little Brighton to Shoreham branch of 6 miles in length. Other companies partially opened include the Manchester & Birmingham from London Road, Manchester, to Heaton Norris, for Stockport,  $5\frac{1}{2}$  miles, on June 4th ; the Maryport & Carlisle, from Maryport to Aspatria, 7 miles, on July 15th ; the Northern & Eastern from a junction with the Eastern Company at Stratford to Broxbourne, 16 miles, on September 15th ; and a small local line from Seghill to Percy Main on the River Tyne.

In London, the opening of the Blackwall Railway from the Minories to Blackwall,  $3\frac{1}{4}$  miles, on July 4th, presented a novel feature, as the trains were drawn by a continuous rope actuated by a steam engine. On starting from the London end, the train was made up with a carriage for each intermediate station and two for Blackwall, and these were detached at the proper point. For the return journey, each carriage was attached to the rope at the several stations, and started for London together, arriving at their destination at intervals corresponding with the distances between the stations.

In Wales, the Taff Vale Railway opened the southern half of its line from Cardiff to Newbridge, a distance of 15 miles, on October 8th, and the

Llanelly made a further 5 mile extension up country 1840 to Parkryn in March.

As regards Scotland, the Glasgow, Paisley, Kilmarnock & Ayr completed its main line of 40 miles in sections, viz. from Irvine to Kilwinning, 3 miles, on March 23rd, from Kilwinning to Howwood, 13 miles, on July 20th, and from Howwood to Paisley,  $5\frac{1}{2}$  miles, on August 11th, the portion between Glasgow and Paisley to be shared with the Greenock Company being brought into use on July 14th. The Slamannan Railway, which extended from the Ballochney line for  $12\frac{1}{2}$  miles in an easterly direction to Causewayend, came into operation in August, from which date a service of two passenger trains per day in each direction was instituted between Glasgow and Causewayend *via* the Garnkirk, Ballochney and Slamannan Railways, whereby the journey time between Glasgow and Edinburgh was reduced to between 4 and 5 hours, the final stage from Causewayend to Edinburgh being accomplished by canal.

In reviewing the railway position from the travellers' point of view at the end of 1840, we see that the 500 miles of new line brought into use during that year enabled a great advance to be made in the facilities of communication. For instance, Glasgow was now for the first time brought within a 24 hour journey of London, the route being from Euston to Fleetwood, over the London & Birmingham, Grand Junction, North Union, and Preston & Wyre Railways, whence a fast steamer



1840 plied two or three times a week to Ardrossan, where the train was again taken for Glasgow, *via* the Ardrossan and Johnston (now worked by locomotives) and Glasgow & Ayr Companies' lines. Towns as far apart as Hull, Liverpool, Gloucester and London were all connected by railway. Thus, although it must be confessed that some of the routes were very circuitous, the progress made had been such as to surprise those who had witnessed the opening of the Liverpool & Manchester Railway only 10 years previously, and from this time forward a general system of railway communication may be said to have been established throughout England, as distinct from a collection of merely local lines.

The attached table, compiled from Robinson's Time-table for 1840, gives a good idea of the speed and frequency of the passenger train services on some of the more important railways at this date.

Before passing on to the next year, it is interesting to note that the York & North Midland Company took an early opportunity of profiting by the lesson being given by the Birmingham & Derby Junction and the Midland Counties Company on the evils of competition. The completion of the York & North Midland to join the North Midland included a curve for northwards traffic towards Leeds; thus by running powers over the larger company's system from Methley to Leeds, the York Company were able to give a service of trains between Leeds and York independent of the line of the Leeds & Selby Company, whose route from Milford to Leeds had

# COMPARATIVE TABLE SHEWING PASSENGER TRAIN SERVICE—1840.

RAILWAY.	Total		MAIL (each way).		FIRST (each way).		MIXED (each way).	
	No. Passg. trams.	Miles.	Time hrs.	Speed m.p.h.	No.	Time hrs.	Speed m.p.h.	No.
	each way.							
LONDON & BIRMINGHAM	14	112	11 <sup>5</sup> / <sub>16</sub>	23.5	2-4	5 <sup>1</sup> / <sub>2</sub> -5 <sup>1</sup> / <sub>2</sub>	21.3	5-6
MIDLAND COUNTIES (Rugby to Derby)	7	10	2 <sup>1</sup> / <sub>2</sub>	19.8	4	2-2 <sup>1</sup> / <sub>2</sub>	22.6	(1st & 2nd & 3rd) 1 <sup>1</sup> / <sub>2</sub> -2 <sup>1</sup> / <sub>2</sub>
NORTH MIDLAND (Derby to Leeds)	6	73	3 <sup>1</sup> / <sub>2</sub>	20.8	3	3 <sup>1</sup> / <sub>2</sub> -3 <sup>1</sup> / <sub>2</sub>	22.4	2
GRAND WESTERN (Bristol to Exeter)	15	63	2 <sup>1</sup> / <sub>2</sub>	27.9	7	2-2 <sup>1</sup> / <sub>2</sub>	30.2	2
NEWCASTLE & CARLISLE (London to Southampton)	5	92	5	25.6	2	3	25.6	1
LANCASTER & PRESTON JUNCTION (Birmingham to Newton Junction)	6	24	...	...	(1st only)	2-3	20.6	3
NORTH UNION (Parslow to Preston)	5	22	...	...	(Quick)	1-...	...	3
YORK AND NORTH MIDLAND (York to Millford)	5	11 <sup>1</sup> / <sub>2</sub>	...	...	...	...	...	...
EASTERN COUNTIES (Shoreditch to Brentwood)	8	17 <sup>1</sup> / <sub>2</sub>	...	...	...	...	...	...
NORTHERN & EASTERN (Shoreditch to Brookbourne)	7	19	...	...	...	...	...	...
CROYDON (Tooley Street to Croydon)	13	10 <sup>1</sup> / <sub>2</sub>	...	...	...	...	...	...
LONDON & GREENWICH (London to Blackwall)	50	31	...	...	13	1 <sup>1</sup> / <sub>2</sub>	21.6	...
BIRMINGHAM & DERBY (Birmingham to Derby)	51	38 <sup>1</sup> / <sub>2</sub>	...	...	(every 1-hour from 8 a.m. to 10 p.m.) (every 1-hour from 8.30 a.m. to 9.15 p.m.)	...	...	...
LONDON & BRIGHTON (Brighton to Shoreham)	6	52	...	...	1	...	...	...
BIRMINGHAM & GLOUCESTER (Birmingham to Gloucester)	5	11	...	...	...	...	...	...
MANCHESTER & FIRMINGHAM (Manchester to Stockport)	5	9 <sup>1</sup> / <sub>2</sub>	...	...	...	...	...	...
LIVERPOOL & MANCHESTER	11	31	...	...	5	...	...	(1st & 2nd) 6
MANCHESTER & BOLTON	10	10	...	...	...	...	...	...
LEEDS & SELBY	4	20	...	...	...	...	...	...
HULL & SELBY	4	30	...	...	...	...	...	...
SHEFFIELD & ROUGHRAM	14	51	...	...	...	...	...	...
NEWCASTLE & NORTH SHIELDS	20	7	...	...	...	...	...	...
MANCHESTER & LEEDS (Manchester to Littleborough)	10	16	...	...	...	...	...	...





hitherto been indispensable. To avoid competition, 1840 therefore, the York Company agreed to lease the Leeds & Selby on mutually favourable terms, with the result that the through service between York and Leeds by the Selby Company's line was withdrawn in favour of the York & North Midland route *via* Methley.

The financial depression which had overtaken the 1841 country and had left its mark so severely on new railway schemes continued in 1841, so that only two insignificant additions to the existing lines were sanctioned during this year. The Northern & Eastern Company obtained leave to make a 6 mile branch from Broxbourne to Hertford, while in Scotland a new local railway, called the **Wilsontown, Morningside & Coltness**, was to form a continuation of the Wishaw and Coltness for about 9 miles in a north-easterly direction.

The disappointing record as regards the projection of new lines is, however, set off to some extent by the important additions which were made to the lines already in operation. In the first place, the opening of the Great Western from Hay Lane to Chippenham, 13 miles, on May 31st, and a similar distance on to Bath a month later, at last completed that great system from end to end. Nor was this all, for by means of the Bristol & Exeter Company, who opened their first portion of 34 miles from Bristol to Bridgwater (including the Weston-super-Mare branch) on June 14th, it was possible to get considerably further west by railway. The

1841 stations of the Great Western & Bristol & Exeter Companies adjoined at Bristol, and to save working expenses it was agreed that the former company should operate the latter until completion and for 5 years subsequently.

The missing link of 10 miles on the Manchester & Leeds Railway, which included the Summit tunnel, was completed on March 1st, from which date that company's trains ran through from Manchester to Leeds, passing over the lines of the North Midland Company for the last 9 miles of the journey from Normanton to the Leeds Station in Hunslet Lane.

Of the new companies, the longest in mileage to start operations this year was the Great North of England, whose  $44\frac{1}{2}$  miles stretch from York to Darlington (including part of the Stockton & Darlington Company's Croft branch, which had been purchased), was opened for freight traffic on January 4th and for passengers on March 31st. Thus was the communication carried from London as far north on the east side of England as Darlington, whence by using the Stockton & Darlington, Stockton & Hartlepool, Hartlepool, Durham & Sunderland & Brandling Junction Railways, it was possible to reach Gateshead by railway. Owing to the roundabout nature of this route, however, and the necessity of crossing the towns of Sunderland and West Hartlepool, the coach was still the most expeditious form of conveyance between Darlington and Newcastle.

A small portion of the Manchester & Sheffield

Railway, viz.  $7\frac{1}{2}$  miles from Ardwick to Godley, made <sup>1841</sup> its appearance on the public time bills for the first time as from November 17th, access to their portion of the London Road station in Manchester being obtained by running powers over the Manchester & Birmingham line from Ardwick.

The London & Brighton Railway was opened in two sections, viz., from the Croydon Railway to Hayward's Heath  $28\frac{1}{2}$  miles, on July 12th, and from Hayward's Heath for the remaining 13 miles to Brighton on September 21st, upon which date the Shoreham branch was joined to the main system.

The Cheltenham & Great Western Union began public traffic on May 31st with the southern portion of their line, from Swindon to Cirencester, the engineering difficulties of the Sapperton tunnel and Stroad valley precluding any further advance for some time. This company was leased to the Great Western, who purchased it two years later.

As regards extensions of railways hitherto only partially opened, the northern portion of the Taff Vale from Newbridge to Merthyr, 9 miles, was completed on April 21st, and the Dinas branch of 3 miles on June 10th; the Northern & Eastern Railway advanced 7 miles from Broxbourne to Harlow on Aug. 9th, and a further 5 to Spelbrook on November 22nd; the Gosport extension of the London & South-Western was brought into use on November 29th.

Minor openings for 1841 include the first section of the Bolton & Preston (worked by the Manchester



1841 & Bolton) from Bolton to Rawlinson Bridge near Chorley,  $9\frac{1}{2}$  miles, on February 4th ; the Stockton & Hartlepool, from Billingham Junction on the Clarence Railway to West Hartlepool, 8 miles, on February 10th, from which date a passenger train service was started from Stockton to Hartlepool in connection with the trains of the Stockton & Darlington Company ; the Chilton branch of the Clarence Railway opened in June ; the Heywood branch of the Manchester & Leeds, only  $1\frac{1}{2}$  miles in length, opened in April ; a small extension of the Blackwall line to Fenchurch Street, and of the Birmingham & Gloucester from Camp Hill to join the London & Birmingham Railway near their terminus in the Midland city.

In Scotland, the Glasgow, Paisley & Greenock was brought into use as between the two last-named places, 16 miles distant, on March 31st, while in Ireland, the Ulster Railway extended its operations from Lisburn to Lurgan, a further 13 miles, on November 8th.

Altogether about 275 miles of new line were brought into use during the year, and served further to consolidate the network of railways which was springing up throughout the country.

1842 We have now reached a stage when for a short while the Railway enterprise of the country may be said to have attained a state of fairly stable equilibrium. The advantages afforded by the railways sanctioned in the palmy days of the railway boom were being actually experienced, and although the

general opinion was that more railways would have to be made in due course in order to provide for parts of the country up till now neglected, it was felt that no undue haste should be used in order to accomplish this object, and there was little indication of the extraordinary change which was to take place three years later, culminating in the Railway Mania of 1846. The question of through communication between England and Scotland and Ireland, however, was engaging a good deal of attention, and a Parliamentary commission ultimately appointed to select among the many rival proposals that one which would best meet all requirements, but this did not mature until after the period with which we are dealing.

Three new railways were sanctioned in 1842, two of which would have been unnecessary if the projects of companies already sanctioned had been carried out according to the original intention.

The Great North of England, finding difficulties in the way of completing their line north of Darlington, acquiesced in the formation of a new company, the **Newcastle & Darlington Junction**, to connect their line with that of the Durham Junction, by making a railway of about 25 miles in length, including a short branch of 2 miles from Belmont to a station in the city of Durham at Gilesgate. Again, the slow progress made by the Eastern Counties, which had only got as far as Brentwood, 18 miles from London, although five years had now elapsed since the company obtained its Act,

1842 induced the local inhabitants to take the initiative, with the result that the **Yarmouth & Norwich Company** was incorporated to make a railway, 20 miles in length, between the two places named. Another local scheme successfully introduced into Parliament was purchased by the London & Birmingham Company, and comprised a branch of 9 miles from their system at Coventry to Leamington.

Turning to new facilities made available this year, the first place must be given to the South-Eastern Railway, whose main line from Redhill as far as Ashford was opened in three sections, *i.e.* from Redhill to Tonbridge,  $19\frac{1}{2}$  miles, on May 26th; Tonbridge to Headcorn, 15 miles, on August 31st; and Headcorn to Ashford,  $10\frac{1}{2}$  miles, on December 1st.

Not less important was the opening of the Edinburgh & Glasgow Railway throughout on February 21st from the Haymarket Station at Edinburgh to Queen's Street, Glasgow, 46 miles, an unusually long stretch of line to be opened at once.

The Manchester & Birmingham Company having at last completed the great viaduct over the town of Stockport, brought into use its line from Heaton Norris to Sandbach, 21 miles in length, on May 10th, joining up the missing link of 5 miles to the Grand Junction Railway at Crewe three months later, from which date the detour *via* Newton Junction for Manchester passengers going South was avoided.

An extension of 12 miles of the Bristol & Exeter, from Bridgwater to Taunton on July 1st, should be noted; and amongst minor additions come the



# RAILWAY MAP OF ENGLAND AND WALES.

Showing Railways opened to public use 1844.

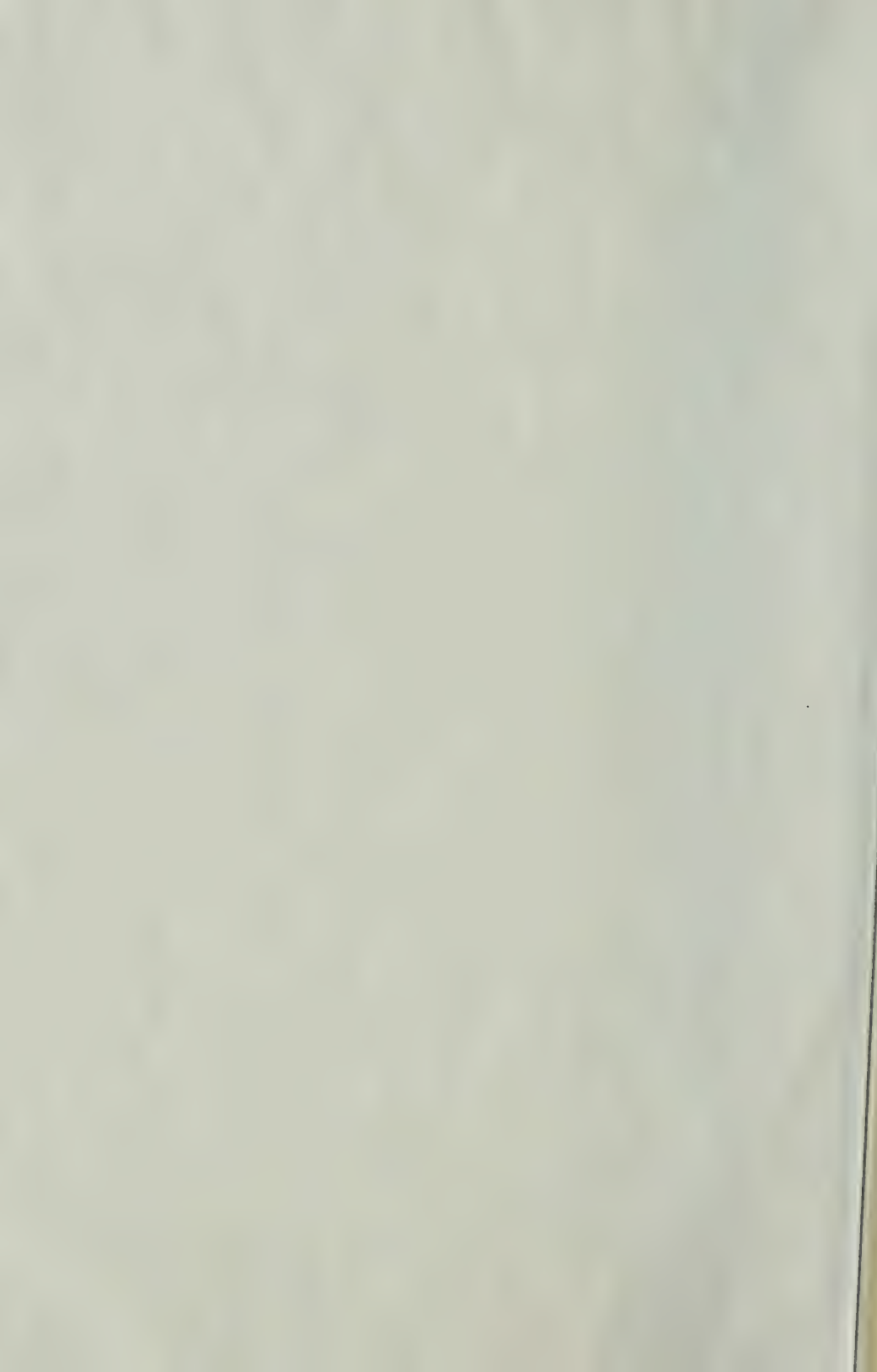
Map of England and Wales showing the railway network as of 1844. The map includes the following details:

- Legend:**
  - Rail
  - Road
  - Canal
  - River
  - Coast
  - Boundary
  - Town
  - Village
  - Hamlet
  - Farm
  - Wood
  - Heath
  - Moor
  - Marsh
  - Lake
  - Sea
- Scale:** 1 inch = 10 miles.
- Compass:** North arrow pointing towards the top of the map.
- Geographical Features:** The map shows the coastline of England and Wales, major rivers, and the locations of numerous towns and cities. The railway network is depicted as a series of lines connecting these locations.

LIST OF PRINCIPAL RAILWAYS.

NAME OF RAILWAY.	LENGTH IN MILES.	OPENED TO PUBLIC USE.
Great Northern Railway	100	1844
Great Eastern Railway	100	1844
Great Western Railway	100	1844
London and North Western Railway	100	1844
London and South Western Railway	100	1844
Midland Railway	100	1844
North Eastern Railway	100	1844
North Western Railway	100	1844
South Eastern Railway	100	1844
South Western Railway	100	1844
Worcester and Birmingham Railway	100	1844
York and North Yorkshire Railway	100	1844





completion of the original Birmingham & Derby 1842 scheme by the direct line from Whitacre to Lawley Street, Birmingham, the construction of which had been postponed, under circumstances already related in connection with the competition with the Midland Counties ; a branch of the Manchester & Leeds to Oldham, 3 miles from their main line ; a 2 mile extension of the Northern and Eastern from Spelbrook to Bishop Stortford ; a 4 mile extension of the Manchester & Sheffield from Godley to Dinting (for Glossop) ; and lastly the opening of the Shildon tunnel by the Stockton & Darlington and the deviation lines in connection therewith in order to avoid the steep rope incline between Shildon and West Auckland.

Altogether about 150 miles of new line were brought into operation, showing a substantial decrease from the totals of previous years. (*See diagram.*)

Some signs of a revival in interest as regards the 1843 promotion of new railways manifested themselves during the Parliamentary Session of 1843, during which some 80 miles of additional lines were sanctioned. A glance at the railway map of England for the year 1842 will at once reveal the fact that the part of the country lying to the east of the London & Birmingham & Midland Companies Railways appears to have been neglected by the promoters of new lines.

As a matter of fact the idea of a direct railway between London and York had been under



1843 consideration for many years, and the well known engineers, Rennie, Cundy, Walker, and Gibbs had all surveyed routes with this end in view, and in this way the principal towns of the East Midlands, such as Cambridge, Peterborough and Lincoln, were to be provided for. It was felt, however, that as the purely agricultural country through which such a line would pass would provide but a small local traffic, the expense of such a large scheme at present could hardly be justified, taking also into consideration the competition that would ensue with the existing composite route to the North *via* the London & Birmingham, Midland Counties and North Midland Railways. The directors of these companies nevertheless must have been convinced that their monopoly of the North and South traffic could not continue indefinitely, apart from the local needs of the counties of Lincoln, Huntingdon, Cambridgeshire, etc., for railway accommodation; but in order to retain their interest in the traffic as long as possible, the London & Birmingham successfully promoted a Bill this session to make a line 47 miles in length from their main line at Blisworth through Northampton (which town had now repented of its folly in opposing the passage of the London & Birmingham through its midst) to Peterborough.

In addition to this considerable project, three extensions, each about 10 miles in length, of existing lines, were authorized, *viz.*, the Oxford branch of the Great Western, Maidstone branch of the South-

Eastern, and an extension of the Northern and Eastern main line to Newport. In the Metropolis, the London & Greenwich Company held the key to the approach of three companies, the Croydon, Brighton, and South-Eastern, all of whose trains ran over the London & Greenwich Railway from Corbet's Lane Junction to the terminus at London Bridge. The toll for this facility had been a constant source of dispute between the Croydon and Greenwich Companies, with the result that on the opening of the South-Eastern Company, the Croydon Company joined forces with the latter and obtained leave to make a short line of  $1\frac{3}{4}$  miles in length from near Corbet's Lane to a new terminus in the Old Kent Road, and thereby rid themselves of all necessity for the use of the Greenwich Company's line.

The diminution in mileage as regards the new lines to be opened continues. The Eastern Counties, after protracted interruptions of their works by bad weather and want of money, at last opened their line from Brentwood to Colchester,  $33\frac{1}{2}$  miles, on March 27th. There, in fact, it stuck, and of the great original scheme for 126 miles of line from London to Yarmouth and Norwich, less than half—the 51 mile stretch from London to Colchester—was ever completed. It may however be noted that most of the originally proposed route was subsequently covered by other independent companies, such as the Eastern Union, and the East Suffolk, not to mention the Yarmouth and Norwich, to which allusion has already been made.

1843 The South-Eastern was extended from Ashford to Folkestone, 15 miles distant, on June 28th, from which place a large traffic to and from the Continent was at once developed, necessitating the employment of two steamers daily in cross-Channel services. The Bristol & Exeter, on May 1st, brought into use a further portion of new line, extending 9 miles beyond Taunton to a temporary station at Beam Bridge, on the north side of the large tunnel under the ridge which here divides the county of Somerset from Devon. The Maryport & Carlisle Company opened another portion of their railway, this time a stretch of 11 miles from the Carlisle end to Wigton, on May 10th.

In Scotland the Glasgow, Paisley, Kilmarnock & Ayr completed its system with the inauguration on April 4th of the Kilmarnock branch for public traffic, thus adding 11 miles to the undertaking.

Of lesser importance we may rank the completion of the Bolton & Preston line from Chorley to Euxton, 5 miles, on June 22nd; the Hertford branch of the Northern & Eastern, on October 31st; and the Bishop Auckland and Weardale as between the junction with the Stockton & Darlington near Shildon and Crook, which took place on November 8th.

All told, 100 new miles of railway were brought into use during the year 1843, acting for the most part as feeders for the larger systems, but mention must be made of the competition for the Manchester and Preston traffic which arose on the completion



of the Bolton & Preston undertaking between that 1843 company and the North Union.

The route of the latter company was longer but well established, whereas the Bolton & Preston Company's trains (worked by the Manchester & Bolton Company) had to use the North Union line for the last 6 miles into Bolton, and were consequently delayed. After a short and sharp struggle, wherein rates were cut and the bad example set by the Midland Companies and Birmingham & Derby Junction Companies followed to the detriment of both companies, wiser counsels prevailed, and an amalgamation arranged between them, which was made legally effective next year.

The time had now arrived when the attention of 1844 Parliament, whose actions had hitherto been confined chiefly to particular phases of railway working, such as the conveyance of mails by railway, was seriously turned to the consideration of the railway system of the country as a whole. As a result, therefore, of the deliberations of a Royal Commission, a comprehensive Act was passed in this year, the most important portion of which was devoted to the question of the possible purchase of the railways by the State. The terms on which this purchase might be carried out have already been outlined in the introduction to this book, and as it is not proposed to deal with any of the subsequently constructed railways which come under the provisions of this Act, it will suffice to draw the reader's attention to the new lines brought into operation this year.

1844 The opening of the Newcastle & Darlington Junction from Darlington to Belmont on June 18th (the Rainton-Durham section had been opened on April 15th), at last formed direct communication between Newcastle, or rather Gateshead, and London. This happy event was celebrated by the usual banquet, to which the London guests arrived by special train starting from Euston at 5 a.m., and arriving at Gateshead at 2.24 p.m., passing over the lines of eight different companies, at an average speed of 45 miles an hour, exclusive of stoppages, a fine performance for those days.

In the West of England the Bristol & Gloucester was opened throughout on July 8th, thus giving direct connection between Bristol and the North of England, while the final portion of the Bristol & Exeter from Beam Bridge to Exeter, was brought into use on May 1st, whereby a main line of 194 miles under the control of one company was secured to the Great Western.

The Yarmouth & Norwich Company commenced to work on April 30th with its single line of  $20\frac{1}{2}$  miles between the towns named, and it is interesting to note that from the beginning use was made of the electric telegraph system, then in its infancy, to regulate the crossing of trains on the single line.

Of lesser mileage we may note the opening of the Maidstone branch of the South-Eastern Railway on September 24th; the Oxford branch of the Great Western, on June 12th; the Leamington branch of the London & Birmingham, on

December 9th; and the further extension of 7<sup>1844</sup> miles of the Manchester & Sheffield to the western face of the great Woodhead tunnel, on August 8th. In Manchester the junction of the Liverpool & Manchester and Manchester & Leeds systems was effected by the Hunts Bank extension, each company constructing a mile or so of new line for the purpose, and both using the new Victoria Station as their terminus in future.

The South-Eastern completed their main line to Dover on February 7th, the last 6 miles of this important work involving great difficulties, including long tunnels under the Abbot's and Shakespeare Cliffs.

In London the South-Eastern and Croydon Companies opened their new terminus at Bricklayers' Arms, on May 1st, from which date the Croydon Company withdrew its service of trains to and from London Bridge, while the South-Eastern Company divided its service evenly between that station and the new terminus. The **West London**, after 8 years of difficulties, having meanwhile changed its name from the original title of Birmingham, Bristol & Thames Junction, opened for traffic in May, but was closed again after a few months, owing to the disinclination of the London & Birmingham and the Great Western Companies to make suitable connection with their trains at the junctions. It is of interest to note that during the time the work of construction of this company was in abeyance for lack of funds, a portion of the route



1844 was used as an experimental track for Webb and Samuda's Atmospheric system of working, whereby the use of locomotives was entirely dispensed with, and which was actually in operation for a short time on the London & Croydon, Dalkey Extension and other railways.

In Ireland, the opening of the Dublin & Drogheda Railway gave access by train for 32 miles north of Dublin, while the  $1\frac{1}{2}$  mile Dalkey extension of the Dublin & Kingstown Company was worked on the atmospheric system from its start on March 29th.

To sum up, about 190 miles new miles of railway were brought into operation during the year, bringing up the total mileage of the railways to 2150 odd miles. Of the lines, therefore, sanctioned by Parliament prior to 1844 (amounting to about 2,500 miles), eliminating those which were never carried out, little remained to be completed, and it is hoped that the reader will by the aid of the attached maps have been able to gain a clear impression of the early railways of our country, which are expressly exempted from purchase by the State under the terms of this important Act.<sup>1</sup>

In conclusion, appended will be found a table of the main lines of England at the present day, in which the mileage coming under the provisions of the Act is separated from the portions of the

<sup>1</sup> Certain early horse railways, such as the Whitby & Pickering and the Hayle Railway, which were converted into locomotive lines on being joined up to the Main Railway System subsequent to the year 1844, have been purposely omitted.

original exempted systems. The important part played by the proviso regarding exemption of 5 mile branches or extensions subsequently constructed is specially noticeable in the case of the London terminal extensions of the London & South-Western, South-Eastern and Great Eastern Companies.

	Miles sanctioned prior to 1844.	in or after 1844.	TOTAL
<b>South-Eastern &amp; Chatham Railway :—</b>			
(i) L.C. & D. MAIN LINE, VICTORIA TO DOVER ... ..		78	78
(ii) S.E. MAIN LINE, CHARING CROSS TO DOVER			
Charing Cross to Corbet's Lane Junction ... ..	3½†	} 26	} 76½
Corbet's Lane Junction to Ton- bridge ... ..			
Tonbridge to Dover ... ..	47		
<b>London, Brighton &amp; South Coast Rail- way :—</b>			
LONDON BRIDGE TO BRIGHTON ...	50		50
<b>London &amp; South-Western Railway :—</b>			
(i) WATERLOO TO SOUTHAMPTON ...	79†		79
(ii) BASINGSTOKE (WORTING) TO PLY- MOUTH			
Worting to Exeter, St. David's ...		122	} 183½
Exeter, St. David's, to Cowley Bridge Junction (G.W.) ...	1¼		
Cowley Bridge Junction to Ply- mouth, Friary ... ..		60½	
<b>Great Western Railway :—</b>			
(i) PADDINGTON TO PENZANCE, VIA OLD ROUTE			
Paddington to Exeter ... ..	194	} 132½	} 326½
Exeter to Penzance ... ..			
DO. VIA NEW ROUTE (Reading to Taunton, Cogload Junction) ...		101½	101½
Carried forward ... ..	374½	520½	895½

# 62 THE EARLY DEVELOPMENT OF

			Miles sanctioned Prior to 1844.	in or after 1844.	TOTAL.	
Brought forward ...	...		374 $\frac{3}{4}$	520 $\frac{1}{4}$	895 $\frac{1}{4}$	
<b>Great Western Railway (continued) :—</b>						
(ii) WOOTTON BASSETT TO FISHGUARD...				178 $\frac{1}{2}$	178 $\frac{1}{2}$	
(iii) DIDCOT TO BIRKENHEAD, VIA OLD ROUTE						
Didcot to Oxford ...	...	...	10 $\frac{1}{4}$	140	165 $\frac{1}{4}$	
Oxford to Chester...	...	...				
Chester to Birkenhead ...	...	...	15 $\frac{1}{4}$			
Do. VIA NEW ROUTE (Old Oak to Banbury, Aynho Junction)	...			64 $\frac{1}{4}$	64 $\frac{1}{4}$	
<b>Great Central Railway :—</b>						
MANCHESTER TO MARYLEBONE						
Manchester to Sheffield ...	...	...	41 $\frac{1}{4}$	169 $\frac{1}{2}$	210 $\frac{3}{4}$	
Sheffield to Marylebone ...	...	...				
<b>London &amp; North-Western Railway :—</b>						
(i) EUSTON TO CARLISLE						
Euston to Rugby ...	...	...	82 $\frac{1}{2}$	51	299	
Rugby to Stafford ...	...	...				
Stafford to Lancaster ...	...	...	96 $\frac{1}{2}$ †			
Lancaster to Carlisle ...	...	...		69		
(ii) CREWE TO HOLYHEAD						
Crewe to Chester ...	...	...	21 $\frac{1}{4}$	84 $\frac{1}{2}$	105 $\frac{3}{4}$	
Chester to Holyhead ...	...	...				
<b>Midland Railway :—</b>						
(i) ST. PANCRAS TO CARLISLE, VIA STAVELEY AND EREWASH VALLEY						
St. Pancras to Leicester (Wigston Junction) ...	...	...		95 $\frac{3}{4}$	308 $\frac{1}{4}$	
Leicester (Wigston Junction) to Trent ...	...	...	24	22 $\frac{1}{4}$		
Trent to Clay Cross ...	...	...				
Clay Cross to Leeds ...	...	...	53 $\frac{1}{4}$ †			
Leeds to Carlisle ...	...	...		112 $\frac{3}{4}$		
(ii) CLAY CROSS TO BRISTOL ...	...	...	151†		151	
<b>Great Northern Railway :—</b>						
KING'S CROSS TO DONCASTER (SHAFTHOLME JUNCTION)						
	...			160 $\frac{1}{4}$	160 $\frac{1}{4}$	
Carried forward ...	...		870 $\frac{1}{4}$	1668 $\frac{1}{4}$	2538 $\frac{1}{2}$	



# THE BRITISH RAILWAY SYSTEM 63

		Miles sanctioned		TOTAL.
		Prior to 1844.	in or after 1844.	
Brought forward ...		870½	1668½	2538½
<b>Great Eastern Railway :—</b>				
(i) LIVERPOOL STREET TO YARMOUTH, VIA IPSWICH				
Liverpool Street to Colchester ...		51½†	70	} 121½
Colchester to Yarmouth ...		...		
(ii) BETHNAL GREEN TO YARMOUTH VIA NORWICH				
Bethnal Green to Newport ...		38½†	84½	} 143½
Newport to Norwich ...		...		
Norwich to Yarmouth ...		20½		
<b>North-Eastern Railway :—</b>				
DONCASTER (SHAFTHOLME JUNCTION) TO BERWICK				
Shaftholme Junction to York (Chaloner's Whin Junction) ...			26	} 174½
York (Chaloner's Whin Junction) to Ferryhill (Tursdale Junction) ...		61		
Ferryhill (Tursdale Junction) to Newcastle, via Durham ...			21	
Newcastle to Heaton South Junc- tion ... ..		2		
Heaton South Junction to Berwick			64½	
<b>Lancashire &amp; Yorkshire Railway :—</b>				
LIVERPOOL TO NORMANTON				
Liverpool to Manchester (direct)...			36½	87
Manchester to Normanton (Goose Hill Junction) ... ..		50½		
		1094½	1970½	3065½

NOTE.—Distances marked † included extensions of original system under 5 miles in length which are exempted from purchase under the terms of the 1844 Act.



# INDEX

In the following index the original Companies are grouped under the name of the Great Company owning, leasing, or working the railway at the present day.

## ENGLAND.

			Date of Incor- poration.	Date of First Opening.	See pages
NORTH-EASTERN :—					
Stockton & Darlington	...	...	1821	1825	5, 6
Clarence	...	...	1828	1833	10, 17
Newcastle & Carlisle	...	...	1829	1835	11, 20
Leeds & Selby	...	...	1830	1834	11, 18
Hartlepool Railway & Dock	...	...	1832	1835	15, 20
Durham Junction	...	...	1834	1838	17, 34
Durham & Sunderland	...	...	„	1836	17, 26
Brandling Junction	...	...	1835	1839	20, 39
Newcastle & North Shields	...	...	1836	„	24, 38
Hull & Selby	...	...	„	1840	24, 43
York & North Midland	...	...	„	„	23, 42
Great North of England	...	...	„	1841	23, 48
Great North of England, Clarence & Hartlepool Junction	...	...	1837	1839	29, 36
Bishop Auckland & Weardale	...	...	„	1843	29, 56
West Durham	...	...	1839	1841	36
Pontop & South Shields (Stanhope & Tyne)	...	...	1842	1834	18
Newcastle & Darlington Junction	...	...	„	1844	51, 58
Stockton & Hartlepool	...	...	„	1841	50
Blyth & Tyne (Seghill to Percy Main)	...	...	1852	1840	44

## LONDON & NORTH-WESTERN :—

Bolton & Leigh	...	...	1825	1831	7, 13
Liverpool & Manchester	...	...	1826	1830	7, 12
Leigh & Kenyon Junction	...	...	1829	1831	11, 13
Warrington Branch	...	...	„	1833	11, 17
Wigan Branch	...	...	1830	1832	12, 15
St. Helens & Runcorn Gap	...	...	„	1833	12, 17
North Union	...	...	1831	1838	13, 33
Grand Junction	...	...	1833	1837	15, 30
London & Birmingham	...	...	„	„	15, 31



LONDON & NORTH-WESTERN (continued) :—				Date of Incor- poration.	Date of First Opening.	See pages
Aylesbury	...	...	...	1836	1839	24, 39
Lancaster & Preston Junction	...	...	...	1837	1840	28, 43
Chester & Crewe	...	...	...	"	"	28, 43
Manchester & Birmingham	...	...	...	"	"	27, 44
MIDLAND :—						
Leicester & Swannington	...	...	...	1830	1832	12, 15
Birmingham & Gloucester	...	...	...	1836	1840	22, 43
Birmingham & Derby Junction	...	...	...	"	1839	22, 37
Midland Counties	...	...	...	"	"	22, 37, 41
North Midland	...	...	...	"	1840	22, 41
Sheffield & Rotherham	...	...	...	"	1838	22, 34
Bristol & Gloucester	...	...	...	1839	1844	34, 58
GREAT WESTERN :—						
Ilanelly	...	...	...	1828	1833	10, 17
Great Western (London & Bristol)	...	...	...	1835	1838	19, 33
Bristol & Exeter	...	...	...	1836	1841	23, 47
Cheltenham & Great Western Union	...	...	...	"	"	22, 49
GREAT EASTERN :—						
Eastern Counties	...	...	...	1836	1839	21, 37
Northern & Eastern	...	...	...	"	1840	22, 44
London & Blackwall	...	...	...	"	"	24, 44
Yarmouth & Norwich	...	...	...	1842	1844	52, 58
LANCASHIRE & YORKSHIRE :—						
Manchester & Bolton	...	...	...	1831	1838	13, 34
Manchester & Leeds	...	...	...	1836	1839	23, 37
Bolton & Preston	...	...	...	1837	1841	28, 49
LONDON & SOUTH-WESTERN :—						
Bodmin & Wadebridge	...	...	...	1832	1834	15, 19
London & Southampton	...	...	...	1834	1838	17, 33
Taw Vale	...	...	...	1838		32
SOUTH-EASTERN & CHATHAM :—						
Canterbury & Whitstable	...	...	...	1825	1830	7, 12
London & Greenwich	...	...	...	1833	1836	16, 27
South-Eastern (London & Dover)	...	...	...	1836	1842	23, 52
LONDON, BRIGHTON & SOUTH COAST :—						
Croydon	...	...	...	1835	1839	20, 37
London & Brighton	...	...	...	1837	1840	28, 44
GREAT CENTRAL :—						
Manchester & Sheffield	...	...	...	1837	1841	29, 48

					Date of Incor- poration.	Date of First Opening.	See pages
TAFF VALE	...	...	...	...	1836	1840	25, 44
MARYPORT & CARLISLE	...	...	...	...	1837	1840	29, 44
L. & N.W. & L. & Y. JOINT :—							
Preston & Wyre	...	...	...	...	1835	1840	19, 43
Fleetwood, Preston & West Riding Junction	...	...	...	...	1836	„	24
L. & N.W. & G.W. JOINT :—							
Birmingham, Bristol & Thames Junc- tion (West London)...	...	...	...	...	1836	1844	24, 59
Chester & Birkenhead...	...	...	...	...	1837	1840	28, 43
SCOTLAND.							
NORTH BRITISH :—							
Monkland & Kirkintilloch	...	...	...	...	1824	1826	5, 8
Ballochney	...	...	...	...	1826	1828	8, 11
Slamannan	...	...	...	...	1835	1840	20, 45
Edinburgh, Leith & Newhaven	...	...	...	...	1836	1846	25
Edinburgh & Glasgow	...	...	...	...	1838	1842	32, 52
Wilsontown, Morningside & Coltness	...	...	...	...	1841		47
CALEDONIAN :—							
Dundee & Newtyle	...	...	...	...	1826	1831	8, 13
Glasgow & Garnkirk	...	...	...	...	„	„	8, 14
Wishaw & Coltness	...	...	...	...	1829	1833	11, 17
Arbroath & Forfar	...	...	...	...	1836	1839	25, 39
Glasgow, Paisley & Greenock	...	...	...	...	1837	1841	30, 50
GLASGOW & SOUTH-WESTERN :—							
Ardrossan & Johnstone	...	...	...	...	1827	1836	9, 27
Paisley & Renfrew	...	...	...	...	1835	1837	20, 32
Glasgow, Paisley, Kilmarnock & Ayr	...	...	...	...	1837	1839	29, 37
CALEDONIAN & N.B. JOINT :—							
Dundee & Arbroath	...	...	...	...	1836	1838	25, 34

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